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July 10, 2018

Eric Pastor  
Golder Associates Inc.  
11231 Richmond Avenue  
Suite D104  
Houston, TX 77082

Work Order: **HS18061322**

Laboratory Results for: **Former MCC Recycling Site**

Dear Eric,

ALS Environmental received 3 sample(s) on Jun 26, 2018 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dane J. Wacasey".

Generated By: **DANE.WACASEY**

Dane J. Wacasey

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**Work Order:** HS18061322

**SAMPLE SUMMARY**

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS18061322-01	USOR-CT-01-180626	Sludge		26-Jun-2018 11:30	26-Jun-2018 14:55	<input type="checkbox"/>
HS18061322-02	USOR-AB-01-180626	Sludge		26-Jun-2018 13:30	26-Jun-2018 14:55	<input type="checkbox"/>
HS18061322-03	USOR-AB-02-180626	Sludge		26-Jun-2018 13:40	26-Jun-2018 14:55	<input type="checkbox"/>

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**Work Order:** HS18061322

**CASE NARRATIVE****Work Order Comments**

- Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.
- The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

**ECD Organics by Method SW1311/8150****Batch ID: 129924**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**ECD Organics by Method SW8151****Batch ID: 129927****Sample ID: HS18061286-01MS**

- MS and MSD are for an unrelated sample

**ECD Organics by Method SW1311/8081A****Batch ID: 129937****Sample ID: HS18061286-01MS**

- MS is for an unrelated sample

**Sample ID: LCSD-129937**

- LCS/LCSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

**ECD Organics by Method SW8081****Batch ID: 129887****Sample ID: USOR-CT-01-180626 (HS18061322-01)**

- Surrogate recoveries were outside of the control limits due to matrix interference.

**GC Semivolatiles by Method TX1005****Batch ID: 129912****Sample ID: USOR-AB-01-180626 (HS18061322-02)**

- The surrogate recoveries could not be determined due to dilution below the calibration range.

**Sample ID: USOR-CT-01-180626 (HS18061322-01)**

- The surrogate recoveries could not be determined due to dilution below the calibration range.

**GCMS Semivolatiles by Method SW1311/8270****Batch ID: 129952**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Client:** Golder Associates Inc.  
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**Work Order:** HS18061322

**CASE NARRATIVE****GCMS Semivolatiles by Method SW8270****Batch ID: 129918****Sample ID: USOR-AB-01-180626 (HS18061322-02)**

- The GCMS semi-volatile extract of this sample was run at a dilution due to a high level of matrix interference.
- The surrogate recoveries could not be determined due to dilution below the calibration range.

**Sample ID: USOR-AB-02-180626 (HS18061322-03)**

- The GCMS semi-volatile extract of this sample was run at a dilution due to a high level of matrix interference.

**Sample ID: USOR-CT-01-180626 (HS18061322-01)**

- The GCMS semi-volatile extract of this sample was run at a dilution due to a high level of matrix interference.
- The surrogate recoveries could not be determined due to dilution below the calibration range.

**Sample ID: HS18061365-01MS**

- MS and MSD are for an unrelated sample

**GCMS Volatiles by Method SW8260****Batch ID: R319074****Sample ID: HS18061424-03MS**

- MS and MSD are for an unrelated sample

**GCMS Volatiles by Method SW1311/8260B****Batch ID: 129940**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Metals by Method SW7470****Batch ID: 129984**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Metals by Method Calculation****Batch ID: R319132**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Metals by Method SW7471A****Batch ID: 130041**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Metals by Method SW1311/6020****Batch ID: 129921**

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**Work Order:** HS18061322

**CASE NARRATIVE****Metals by Method SW1311/6020****Batch ID: 129921**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**Metals by Method SW6020****Batch ID: 129850****Sample ID: HS18061231-02MS**

- MS/MSD and DUPs are for an unrelated sample

**Wet Chemistry by Method SW9014****Batch ID: 130049****Sample ID: USOR-AB-02-180626 (HS18061322-03)**

- The analyses for Metals was subcontracted to ALS Environmental in Fort Collins, CO. Final report attached.
- The analyses for Cyanide, Available and Moisture were subcontracted to ALS Environmental in Holland, MI.

**WetChemistry by Method SW7.3.4.2****Batch ID: R318973**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**WetChemistry by Method SW7.3.3.2****Batch ID: R318975**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**WetChemistry by Method SW1030****Batch ID: R319059**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**WetChemistry by Method SW9065****Batch ID: 130008**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**WetChemistry by Method SW9060****Batch ID: 130012****Sample ID: USOR-CT-01-180626 (HS18061322-01MS)**

- The recovery of the Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) associated with this analyte was outside of the established control limits. However, the LCS was within control limits. The recovery of the MS/MSD may be due to sample matrix interference. (Total Organic Carbon)

**WetChemistry by Method SW9045B****Batch ID: R318772**

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**Work Order:** HS18061322

**CASE NARRATIVE****WetChemistry by Method SW9045B****Batch ID: R318772**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**WetChemistry by Method SW7196****Batch ID: 129987****Sample ID: USOR-AB-02-180626 (HS18061322-03MS)**

- The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. The sample was post-digestion spiked, and this matrix spike was within acceptable recovery limits.

**WetChemistry by Method SW9014****Batch ID: 129925,130049,130049**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

**WetChemistry by Method E1664****Batch ID: 129869**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-CT-01-180626  
 Collection Date: 26-Jun-2018 11:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TCLP VOLATILES</b>				<b>Method:SW1311/8260B</b>	Leache:SW1311 / 28-Jun-2018	Prep:SW1311 / 28-Jun-2018	Analyst: PC
1,1-Dichloroethene	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 00:39
1,2-Dichloroethane	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 00:39
1,4-Dichlorobenzene	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 00:39
2-Butanone	< 0.020		0.020	0.20	mg/L	20	03-Jul-2018 00:39
<b>Benzene</b>	<b>0.037</b>	J	<b>0.012</b>	<b>0.10</b>	<b>mg/L</b>	20	03-Jul-2018 00:39
Carbon tetrachloride	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 00:39
Chlorobenzene	< 0.0080		0.0080	0.10	mg/L	20	03-Jul-2018 00:39
Chloroform	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 00:39
Tetrachloroethene	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 00:39
Trichloroethene	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 00:39
Vinyl chloride	< 0.0080		0.0080	0.040	mg/L	20	03-Jul-2018 00:39
<i>Surr: 1,2-Dichloroethane-d4</i>	89.2			70-126	%REC	20	03-Jul-2018 00:39
<i>Surr: 4-Bromofluorobenzene</i>	102			82-124	%REC	20	03-Jul-2018 00:39
<i>Surr: Dibromofluoromethane</i>	96.1			77-123	%REC	20	03-Jul-2018 00:39
<i>Surr: Toluene-d8</i>	105			82-127	%REC	20	03-Jul-2018 00:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-CT-01-180626  
 Collection Date: 26-Jun-2018 11:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>					
1,1,1-Trichloroethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
1,1,2,2-Tetrachloroethane	< 0.39		0.39	2.4	mg/Kg	500	03-Jul-2018 01:38
1,1,2-Trichlor-1,2,2-trifluoroethane	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 01:38
1,1,2-Trichloroethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
1,1-Dichloroethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
1,2,4-Trichlorobenzene	< 0.48		0.48	2.4	mg/Kg	500	03-Jul-2018 01:38
1,2-Dibromo-3-chloropropane	< 0.48		0.48	2.4	mg/Kg	500	03-Jul-2018 01:38
1,2-Dibromoethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
1,2-Dichlorobenzene	< 0.48		0.48	2.4	mg/Kg	500	03-Jul-2018 01:38
1,2-Dichloroethane	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 01:38
1,2-Dichloropropane	< 0.39		0.39	2.4	mg/Kg	500	03-Jul-2018 01:38
1,3-Dichlorobenzene	< 0.48		0.48	2.4	mg/Kg	500	03-Jul-2018 01:38
1,4-Dichlorobenzene	< 0.48		0.48	2.4	mg/Kg	500	03-Jul-2018 01:38
2-Butanone	< 0.63		0.63	4.8	mg/Kg	500	03-Jul-2018 01:38
2-Chloroethyl vinyl ether	< 0.97		0.97	4.8	mg/Kg	500	03-Jul-2018 01:38
2-Hexanone	< 0.68		0.68	4.8	mg/Kg	500	03-Jul-2018 01:38
4-Methyl-2-pentanone	< 0.97		0.97	4.8	mg/Kg	500	03-Jul-2018 01:38
Acetone	< 0.97		0.97	9.7	mg/Kg	500	03-Jul-2018 01:38
Acrolein	< 0.97		0.97	9.7	mg/Kg	500	03-Jul-2018 01:38
Acrylonitrile	< 1.2		1.2	4.8	mg/Kg	500	03-Jul-2018 01:38
Benzene	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
Bromodichloromethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
Bromoform	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 01:38
Bromomethane	< 0.48		0.48	4.8	mg/Kg	500	03-Jul-2018 01:38
Carbon disulfide	< 0.29		0.29	4.8	mg/Kg	500	03-Jul-2018 01:38
Carbon tetrachloride	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 01:38
Chlorobenzene	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 01:38
Chloroethane	< 0.39		0.39	4.8	mg/Kg	500	03-Jul-2018 01:38
Chloroform	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
Chloromethane	< 0.24		0.24	4.8	mg/Kg	500	03-Jul-2018 01:38
cis-1,2-Dichloroethene	< 0.39		0.39	2.4	mg/Kg	500	03-Jul-2018 01:38
cis-1,3-Dichloropropene	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
Cyclohexane	< 0.48	n	0.48	2.4	mg/Kg	500	03-Jul-2018 01:38
Dibromochloromethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
Dichlorodifluoromethane	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 01:38
<b>Ethylbenzene</b>	<b>26</b>		<b>0.34</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 01:38
<b>Isopropylbenzene</b>	<b>5.5</b>		<b>0.44</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 01:38
<b>m,p-Xylene</b>	<b>100</b>		<b>0.78</b>	<b>4.8</b>	<b>mg/Kg</b>	500	03-Jul-2018 01:38

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-CT-01-180626  
 Collection Date: 26-Jun-2018 11:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>					
Methyl acetate	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 01:38
Methyl tert-butyl ether	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
Methylcyclohexane	< 0.48		0.48	2.4	mg/Kg	500	03-Jul-2018 01:38
Methylene chloride	< 0.48		0.48	4.8	mg/Kg	500	03-Jul-2018 01:38
<b>o-Xylene</b>	<b>29</b>		<b>0.48</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 01:38
Styrene	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 01:38
Tetrachloroethene	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 01:38
<b>Toluene</b>	<b>13</b>		<b>0.29</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 01:38
trans-1,2-Dichloroethene	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
trans-1,3-Dichloropropene	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 01:38
Trichloroethene	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 01:38
Trichlorofluoromethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 01:38
Vinyl chloride	< 0.39		0.39	0.97	mg/Kg	500	03-Jul-2018 01:38
<b>Xylenes, Total</b>	<b>130</b>		<b>0.48</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 01:38
<i>Surr: 1,2-Dichloroethane-d4</i>	103			70-126	%REC	500	03-Jul-2018 01:38
<i>Surr: 4-Bromofluorobenzene</i>	102			70-130	%REC	500	03-Jul-2018 01:38
<i>Surr: Dibromofluoromethane</i>	101			70-130	%REC	500	03-Jul-2018 01:38
<i>Surr: Toluene-d8</i>	100.0			70-130	%REC	500	03-Jul-2018 01:38
<b>TCLP SEMIVOLATILES</b>		<b>Method:SW1311/8270</b>		Leache:SW1311 / 28-Jun-2018	Prep:SW3510 / 29-Jun-2018	<b>Analyst: SGA</b>	
2,4,5-Trichlorophenol	< 0.00092		0.00092	0.0051	mg/L	1	29-Jun-2018 20:21
2,4,6-Trichlorophenol	< 0.0014		0.0014	0.0051	mg/L	1	29-Jun-2018 20:21
2,4-Dinitrotoluene	< 0.0010		0.0010	0.0051	mg/L	1	29-Jun-2018 20:21
<b>Cresols, Total</b>	<b>0.024</b>		<b>0.0020</b>	<b>0.015</b>	<b>mg/L</b>	1	29-Jun-2018 20:21
Hexachlorobenzene	< 0.0011		0.0011	0.0051	mg/L	1	29-Jun-2018 20:21
Hexachlorobutadiene	< 0.0011		0.0011	0.0051	mg/L	1	29-Jun-2018 20:21
Hexachloroethane	< 0.0010		0.0010	0.0051	mg/L	1	29-Jun-2018 20:21
Nitrobenzene	< 0.00082		0.00082	0.0051	mg/L	1	29-Jun-2018 20:21
Pentachlorophenol	< 0.0016		0.0016	0.0051	mg/L	1	29-Jun-2018 20:21
<b>Pyridine</b>	<b>0.0057</b>		<b>0.0020</b>	<b>0.0051</b>	<b>mg/L</b>	1	29-Jun-2018 20:21
<i>Surr: 2,4,6-Tribromophenol</i>	125			39-153	%REC	1	29-Jun-2018 20:21
<i>Surr: 2-Fluorobiphenyl</i>	85.3			40-147	%REC	1	29-Jun-2018 20:21
<i>Surr: 2-Fluorophenol</i>	73.6			21-110	%REC	1	29-Jun-2018 20:21
<i>Surr: 4-Terphenyl-d14</i>	93.0			39-141	%REC	1	29-Jun-2018 20:21
<i>Surr: Nitrobenzene-d5</i>	77.3			37-140	%REC	1	29-Jun-2018 20:21
<i>Surr: Phenol-d6</i>	80.8			11-110	%REC	1	29-Jun-2018 20:21

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-CT-01-180626  
 Collection Date: 26-Jun-2018 11:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>				Method:SW8270		Prep:SW3541 / 28-Jun-2018	
<b>1,1'-Biphenyl</b>	<b>1.9</b>		<b>0.34</b>	<b>1.3</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
1,2-Diphenylhydrazine	< 0.22		0.22	1.3	mg/Kg	100	03-Jul-2018 16:23
2,4,5-Trichlorophenol	< 0.50		0.50	1.3	mg/Kg	100	03-Jul-2018 16:23
2,4,6-Trichlorophenol	< 0.34		0.34	1.3	mg/Kg	100	03-Jul-2018 16:23
2,4-Dichlorophenol	< 0.26		0.26	1.3	mg/Kg	100	03-Jul-2018 16:23
2,4-Dimethylphenol	< 0.65		0.65	1.3	mg/Kg	100	03-Jul-2018 16:23
2,4-Dinitrophenol	< 0.89		0.89	2.6	mg/Kg	100	03-Jul-2018 16:23
2,4-Dinitrotoluene	< 0.18		0.18	1.3	mg/Kg	100	03-Jul-2018 16:23
2,6-Dinitrotoluene	< 0.65		0.65	1.3	mg/Kg	100	03-Jul-2018 16:23
2-Chloronaphthalene	< 0.26		0.26	1.3	mg/Kg	100	03-Jul-2018 16:23
2-Chlorophenol	< 0.26		0.26	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>2-Methylnaphthalene</b>	<b>16</b>		<b>0.099</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
2-Methylphenol	< 0.22		0.22	1.3	mg/Kg	100	03-Jul-2018 16:23
2-Nitroaniline	< 0.38		0.38	1.3	mg/Kg	100	03-Jul-2018 16:23
2-Nitrophenol	< 0.50		0.50	1.3	mg/Kg	100	03-Jul-2018 16:23
3&4-Methylphenol	< 0.20		0.20	1.3	mg/Kg	100	03-Jul-2018 16:23
3,3'-Dichlorobenzidine	< 0.50		0.50	1.3	mg/Kg	100	03-Jul-2018 16:23
3-Nitroaniline	< 0.38		0.38	1.3	mg/Kg	100	03-Jul-2018 16:23
4,6-Dinitro-2-methylphenol	< 0.42		0.42	1.3	mg/Kg	100	03-Jul-2018 16:23
4-Bromophenyl phenyl ether	< 0.32		0.32	1.3	mg/Kg	100	03-Jul-2018 16:23
4-Chloro-3-methylphenol	< 0.14		0.14	1.3	mg/Kg	100	03-Jul-2018 16:23
4-Chloroaniline	< 0.22		0.22	1.3	mg/Kg	100	03-Jul-2018 16:23
4-Chlorophenyl phenyl ether	< 0.30		0.30	1.3	mg/Kg	100	03-Jul-2018 16:23
4-Nitroaniline	< 0.44		0.44	1.3	mg/Kg	100	03-Jul-2018 16:23
4-Nitrophenol	< 0.38		0.38	2.6	mg/Kg	100	03-Jul-2018 16:23
<b>Acenaphthene</b>	<b>1.1</b>		<b>0.099</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Acenaphthylene	< 0.20		0.20	0.65	mg/Kg	100	03-Jul-2018 16:23
Acetophenone	< 0.16		0.16	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Anthracene</b>	<b>1.5</b>		<b>0.099</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Atrazine	< 0.40		0.40	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Benz(a)anthracene</b>	<b>1.3</b>		<b>0.32</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Benzaldehyde	< 0.24	n	0.24	1.3	mg/Kg	100	03-Jul-2018 16:23
Benzidine	< 0.28		0.28	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Benzo(a)pyrene</b>	<b>0.73</b>		<b>0.20</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
<b>Benzo(b)fluoranthene</b>	<b>0.46</b>	J	<b>0.24</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Benzo(g,h,i)perylene	< 0.14		0.14	0.65	mg/Kg	100	03-Jul-2018 16:23
Benzo(k)fluoranthene	< 0.18		0.18	0.65	mg/Kg	100	03-Jul-2018 16:23
Bis(2-chloroethoxy)methane	< 0.18		0.18	1.3	mg/Kg	100	03-Jul-2018 16:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-CT-01-180626  
 Collection Date: 26-Jun-2018 11:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>							
				<b>Method:SW8270</b>			
Bis(2-chloroethyl)ether	< 0.22		0.22	1.3	mg/Kg	100	03-Jul-2018 16:23
Bis(2-chloroisopropyl)ether	< 0.28		0.28	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Bis(2-ethylhexyl)phthalate</b>	<b>3.4</b>		<b>0.34</b>	<b>1.3</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Butyl benzyl phthalate	< 0.26		0.26	1.3	mg/Kg	100	03-Jul-2018 16:23
Caprolactam	< 0.24		0.24	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Carbazole</b>	<b>0.93</b>	J	<b>0.24</b>	<b>1.3</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
<b>Chrysene</b>	<b>2.6</b>		<b>0.16</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
<b>Di-n-butyl phthalate</b>	<b>1.2</b>	J	<b>0.24</b>	<b>1.3</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
<b>Di-n-octyl phthalate</b>	<b>0.55</b>	J	<b>0.18</b>	<b>1.3</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Dibenz(a,h)anthracene	< 0.32		0.32	0.65	mg/Kg	100	03-Jul-2018 16:23
Dibenzofuran	< 0.14		0.14	0.65	mg/Kg	100	03-Jul-2018 16:23
Diethyl phthalate	< 0.20		0.20	1.3	mg/Kg	100	03-Jul-2018 16:23
Dimethyl phthalate	< 0.16		0.16	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Fluoranthene</b>	<b>1.3</b>		<b>0.22</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
<b>Fluorene</b>	<b>1.9</b>		<b>0.22</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Hexachlorobenzene	< 0.18		0.18	1.3	mg/Kg	100	03-Jul-2018 16:23
Hexachlorobutadiene	< 0.24		0.24	1.3	mg/Kg	100	03-Jul-2018 16:23
Hexachlorocyclopentadiene	< 0.16		0.16	1.3	mg/Kg	100	03-Jul-2018 16:23
Hexachloroethane	< 0.30		0.30	1.3	mg/Kg	100	03-Jul-2018 16:23
Indeno(1,2,3-cd)pyrene	< 0.16		0.16	0.65	mg/Kg	100	03-Jul-2018 16:23
Isophorone	< 0.16		0.16	1.3	mg/Kg	100	03-Jul-2018 16:23
N-Nitrosodi-n-propylamine	< 0.22		0.22	1.3	mg/Kg	100	03-Jul-2018 16:23
N-Nitrosodimethylamine	< 0.24		0.24	1.3	mg/Kg	100	03-Jul-2018 16:23
N-Nitrosodiphenylamine	< 0.14		0.14	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Naphthalene</b>	<b>110</b>		<b>0.59</b>	<b>3.3</b>	<b>mg/Kg</b>	500	03-Jul-2018 16:04
Nitrobenzene	< 0.18		0.18	1.3	mg/Kg	100	03-Jul-2018 16:23
Pentachlorophenol	< 0.65		0.65	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Phenanthrene</b>	<b>6.1</b>		<b>0.30</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Phenol	< 0.22		0.22	1.3	mg/Kg	100	03-Jul-2018 16:23
<b>Pyrene</b>	<b>2.7</b>		<b>0.12</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:23
Pyridine	< 0.18		0.18	1.3	mg/Kg	100	03-Jul-2018 16:23
<i>Surr: 2,4,6-Tribromophenol</i>	0	S		36-126	%REC	100	03-Jul-2018 16:23
<i>Surr: 2,4,6-Tribromophenol</i>	0	S		36-126	%REC	500	03-Jul-2018 16:04
<i>Surr: 2-Fluorobiphenyl</i>	0	S		43-125	%REC	500	03-Jul-2018 16:04
<i>Surr: 2-Fluorobiphenyl</i>	0	S		43-125	%REC	100	03-Jul-2018 16:23
<i>Surr: 2-Fluorophenol</i>	0	S		37-125	%REC	100	03-Jul-2018 16:23
<i>Surr: 2-Fluorophenol</i>	0	S		37-125	%REC	500	03-Jul-2018 16:04
<i>Surr: 4-Terphenyl-d14</i>	0	S		32-125	%REC	500	03-Jul-2018 16:04

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Client: Golder Associates Inc.  
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 Sample ID: USOR-CT-01-180626  
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**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>		<b>Method:SW8270</b>					Prep:SW3541 / 28-Jun-2018 Analyst: ACN
Surr: 4-Terphenyl-d14	0	S		32-125	%REC	100	03-Jul-2018 16:23
Surr: Nitrobenzene-d5	0	S		37-125	%REC	100	03-Jul-2018 16:23
Surr: Nitrobenzene-d5	0	S		37-125	%REC	500	03-Jul-2018 16:04
Surr: Phenol-d6	0	S		40-125	%REC	500	03-Jul-2018 16:04
Surr: Phenol-d6	0	S		40-125	%REC	100	03-Jul-2018 16:23
<b>TEXAS TPH BY TX1005</b>		<b>Method:TX1005</b>					Prep:TX1005PR / 28-Jun-2018 Analyst: MBG
nC6 to nC12	11,000		580	3900	mg/Kg	50	03-Jul-2018 09:04
>nC12 to nC28	21,000		770	3900	mg/Kg	50	03-Jul-2018 09:04
>nC28 to nC35	4,500		770	3900	mg/Kg	50	03-Jul-2018 09:04
Total Petroleum Hydrocarbon	36,500		580	3900	mg/Kg	50	03-Jul-2018 09:04
Surr: 2-Fluorobiphenyl	0	S		70-130	%REC	50	03-Jul-2018 09:04
Surr: Trifluoromethyl benzene	0	S		70-130	%REC	50	03-Jul-2018 09:04
<b>TCLP PESTICIDES BY SW8081B</b>		<b>Method:SW1311/8081A</b>			Leache:SW1311 / 28-Jun-2018	Prep:SW3510C/3665A / 28-Jun-2018	Analyst: STH
Chlordane	< 0.00021		0.00021	0.00052	mg/L	1	03-Jul-2018 05:17
Endrin	< 0.000031		0.000031	0.00010	mg/L	1	03-Jul-2018 05:17
gamma-BHC	0.00016	P	0.000010	0.000052	mg/L	1	03-Jul-2018 05:17
Heptachlor	< 0.000010		0.000010	0.000052	mg/L	1	03-Jul-2018 05:17
Heptachlor epoxide	0.000034	J	0.000010	0.000052	mg/L	1	03-Jul-2018 05:17
Methoxychlor	< 0.00016		0.00016	0.00052	mg/L	1	03-Jul-2018 05:17
Toxaphene	< 0.00021		0.00021	0.00052	mg/L	1	03-Jul-2018 05:17
Surr: Decachlorobiphenyl	64.0			30-150	%REC	1	03-Jul-2018 05:17
Surr: Tetrachloro-m-xylene	88.5			30-150	%REC	1	03-Jul-2018 05:17
<b>TCLP HERBICIDES BY SW8151A</b>		<b>Method:SW1311/8150</b>			Leache:SW1311 / 28-Jun-2018	Prep:SW8151 / 28-Jun-2018	Analyst: STH
2,4,5-TP (Silvex)	< 0.000053		0.000053	0.00021	mg/L	1	30-Jun-2018 15:09
2,4-D	< 0.000064		0.000064	0.00021	mg/L	1	30-Jun-2018 15:09
Surr: DCAA	56.2			40-140	%REC	1	30-Jun-2018 15:09

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**ANALYTICAL REPORT**  
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ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>ORGANOCHLORINE PESTICIDES BY SW8081B</b>							
			Method:SW8081				Prep:SW3541 / 28-Jun-2018 Analyst: STH
4,4'-DDD	0.021	P	0.0010	0.0066	mg/Kg	1	06-Jul-2018 02:32
4,4'-DDE	0.0043	J	0.0010	0.0066	mg/Kg	1	06-Jul-2018 02:32
4,4'-DDT	0.0055	J	0.0010	0.0066	mg/Kg	1	06-Jul-2018 02:32
Aldrin	0.0084	P	0.00060	0.0033	mg/Kg	1	06-Jul-2018 02:32
alpha-BHC	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 02:32
beta-BHC	0.012	P	0.00060	0.0033	mg/Kg	1	06-Jul-2018 02:32
Chlordane	< 0.0040		0.0040	0.033	mg/Kg	1	06-Jul-2018 02:32
delta-BHC	0.0057	P	0.00040	0.0033	mg/Kg	1	06-Jul-2018 02:32
Dieldrin	< 0.0010		0.0010	0.0066	mg/Kg	1	06-Jul-2018 02:32
Endosulfan I	0.0021	J	0.00060	0.0033	mg/Kg	1	06-Jul-2018 02:32
Endosulfan II	0.011		0.0012	0.0066	mg/Kg	1	06-Jul-2018 02:32
Endosulfan sulfate	0.0087		0.0012	0.0066	mg/Kg	1	06-Jul-2018 02:32
Endrin	0.0053	J	0.0012	0.0066	mg/Kg	1	06-Jul-2018 02:32
Endrin aldehyde	0.0061	J	0.0012	0.0066	mg/Kg	1	06-Jul-2018 02:32
gamma-BHC	< 0.00040		0.00040	0.0033	mg/Kg	1	06-Jul-2018 02:32
Heptachlor	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 02:32
Heptachlor epoxide	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 02:32
Methoxychlor	0.050		0.0068	0.033	mg/Kg	1	06-Jul-2018 02:32
Toxaphene	< 0.0096		0.0096	0.033	mg/Kg	1	06-Jul-2018 02:32
Surr: Decachlorobiphenyl	87.0			59-144	%REC	1	06-Jul-2018 02:32
Surr: Tetrachloro-m-xylene	520	S		56.9-130	%REC	1	06-Jul-2018 02:32
<b>CHLORINATED HERBICIDES BY SW8151A</b>							
			Method:SW8151				Prep:SW8151 / 28-Jun-2018 Analyst: STH
2,4,5-TP (Silvex)	< 0.0034		0.0034	0.0066	mg/Kg	1	03-Jul-2018 23:57
2,4-D	< 0.0014		0.0014	0.013	mg/Kg	1	03-Jul-2018 23:57
Surr: DCAA	140			30-150	%REC	1	03-Jul-2018 23:57
<b>TRIVALENT CHROMIUM</b>							
			Method:Calculation				Analyst: DQ
Chromium, Trivalent	17.7	n	0.700	5.00	mg/Kg	1	03-Jul-2018 17:48
<b>TCLP METALS BY SW6020A</b>							
			Method:SW1311/6020	Leache:SW1311 / 28-Jun-2018	Prep:SW3010A / 28-Jun-2018		Analyst: JCJ
Arsenic	< 0.00400		0.00400	0.0500	mg/L	1	29-Jun-2018 00:21
Barium	0.829		0.0190	0.200	mg/L	1	29-Jun-2018 00:21
Cadmium	< 0.00200		0.00200	0.0500	mg/L	1	29-Jun-2018 00:21
Chromium	0.0188	J	0.00400	0.0500	mg/L	1	29-Jun-2018 00:21
Lead	< 0.00600		0.00600	0.0500	mg/L	1	29-Jun-2018 00:21
Selenium	< 0.0110		0.0110	0.0500	mg/L	1	29-Jun-2018 00:21
Silver	< 0.00200		0.00200	0.0500	mg/L	1	29-Jun-2018 00:21

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**ANALYTICAL REPORT**

WorkOrder:HS18061322  
 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>METALS BY SW6020A</b>							
				<b>Method:SW6020</b>			
Antimony	23.4		0.0595	0.458	mg/Kg	1	27-Jun-2018 21:11
Arsenic	1.54		0.0641	0.458	mg/Kg	1	27-Jun-2018 21:11
Barium	310		0.549	9.16	mg/Kg	20	28-Jun-2018 10:58
Beryllium	0.0744	J	0.0192	0.458	mg/Kg	1	27-Jun-2018 21:11
Boron	28.3		0.705	2.29	mg/Kg	1	27-Jun-2018 21:11
Cadmium	0.648		0.0247	0.458	mg/Kg	1	27-Jun-2018 21:11
Chromium	17.7		0.0211	0.458	mg/Kg	1	27-Jun-2018 21:11
Cobalt	5.86		0.0137	0.458	mg/Kg	1	27-Jun-2018 21:11
Copper	106		0.0348	0.183	mg/Kg	1	27-Jun-2018 21:11
Lead	16.0		0.0119	0.458	mg/Kg	1	27-Jun-2018 21:11
Molybdenum	25.3		0.0165	0.458	mg/Kg	1	27-Jun-2018 21:11
Nickel	34.5		0.0440	0.458	mg/Kg	1	27-Jun-2018 21:11
Selenium	0.226	J	0.0833	0.458	mg/Kg	1	27-Jun-2018 21:11
Silver	0.482		0.0137	0.458	mg/Kg	1	27-Jun-2018 21:11
Thallium	0.354	J	0.204	0.458	mg/Kg	1	27-Jun-2018 21:11
Tin	6.10		0.0586	1.37	mg/Kg	1	27-Jun-2018 21:11
Titanium	93.3		0.0366	0.458	mg/Kg	1	27-Jun-2018 21:11
Vanadium	15.1		0.0687	0.458	mg/Kg	1	27-Jun-2018 21:11
Zinc	664		3.11	9.16	mg/Kg	20	28-Jun-2018 10:58
<b>TCLP MERCURY BY SW7470A</b>							
				<b>Method:SW7470</b>	Leache:SW1311 / 28-Jun-2018	Prep:SW7470 / 29-Jun-2018	Analyst: JCJ
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	30-Jun-2018 11:35
<b>MERCURY BY SW7471B</b>							
				<b>Method:SW7471A</b>		Prep:SW7471A / 03-Jul-2018	Analyst: JBA
Mercury	1.88		0.00238	0.0169	mg/Kg	5	03-Jul-2018 14:13
<b>OIL AND GREASE BY E1664A</b>							
				<b>Method:E1664</b>		Prep:E1664 / 27-Jun-2018	Analyst: KAH
Oil and Grease	25,000		100	100	mg/Kg	1	02-Jul-2018 14:30
<b>BURN RATE BY METHOD SW1030</b>							
				<b>Method:SW1030</b>			Analyst: KAH
Ignitability, Solid	Negative		0	0	Burn Rate, mm/sec	1	02-Jul-2018 14:30
<b>REACTIVE CYANIDE</b>							
				<b>Method:SW7.3.3.2</b>		Prep:SW7.3.3.2	Analyst: MZD
Reactive Cyanide	< 100	n	100	100	mg/Kg	1	29-Jun-2018 16:46
<b>REACTIVE SULFIDE</b>							
				<b>Method:SW7.3.4.2</b>			Analyst: MZD
Reactive Sulfide	< 100	n	100	100	mg/Kg	1	29-Jun-2018 16:36
<b>HEXAVALENT CHROMIUM BY SW7196A</b>							
				<b>Method:SW7196</b>		Prep:SW3060A / 02-Jul-2018	Analyst: JHD
Chromium, Hexavalent	< 0.299		0.299	1.99	mg/kg	1	02-Jul-2018 14:15
<b>CYANIDE</b>							
				<b>Method:SW9014</b>		Prep:SW9010C / 28-Jun-2018	Analyst: KVL
Cyanide	< 0.277		0.277	1.85	mg/Kg	1	28-Jun-2018 13:20

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**ANALYTICAL REPORT**  
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 Lab ID:HS18061322-01  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH SOIL BY SW9045D</b>							Analyst: KVL
pH	7.84	H	0.100	0.100	pH Units	1	27-Jun-2018 14:45
Temp Deg C @pH	27.6	H	0	0	°C	1	27-Jun-2018 14:45
<b>TOTAL ORGANIC CARBON BY SW9060A</b>							Analyst: KMU
Total Organic Carbon	35.4		0.0600	0.0600	wt%-dry	1	02-Jul-2018 14:00
<b>PHENOLICS</b>							Analyst: MZD
Phenolics, Total Recoverable	6.54		0.998	2.50	mg/kg	1	02-Jul-2018 15:49
<b>SUB ANALYSIS AVAILABLE CYANIDE - EPA OIA-1667</b>							Analyst: SUBHO
Subcontract Analysis	See Attached		0		NA	1	02-Jul-2018 08:34
<b>SUBCONTRACT ANALYSIS - METALS ANALYSIS</b>							Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	05-Jul-2018 14:31

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Client: Golder Associates Inc.  
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**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TCLP VOLATILES</b>				<b>Method:SW1311/8260B</b>	Leache:SW1311 / 28-Jun-2018	Prep:SW1311 / 28-Jun-2018	Analyst: PC
1,1-Dichloroethene	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 02:42
1,2-Dichloroethane	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 02:42
1,4-Dichlorobenzene	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 02:42
2-Butanone	< 0.020		0.020	0.20	mg/L	20	03-Jul-2018 02:42
<b>Benzene</b>	<b>0.021</b>	J	<b>0.012</b>	<b>0.10</b>	<b>mg/L</b>	20	03-Jul-2018 02:42
Carbon tetrachloride	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 02:42
Chlorobenzene	< 0.0080		0.0080	0.10	mg/L	20	03-Jul-2018 02:42
Chloroform	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 02:42
Tetrachloroethene	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 02:42
Trichloroethene	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 02:42
Vinyl chloride	< 0.0080		0.0080	0.040	mg/L	20	03-Jul-2018 02:42
<i>Surr: 1,2-Dichloroethane-d4</i>	89.5			70-126	%REC	20	03-Jul-2018 02:42
<i>Surr: 4-Bromofluorobenzene</i>	104			82-124	%REC	20	03-Jul-2018 02:42
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	20	03-Jul-2018 02:42
<i>Surr: Toluene-d8</i>	106			82-127	%REC	20	03-Jul-2018 02:42

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**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>					
1,1,1-Trichloroethane	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
1,1,2,2-Tetrachloroethane	< 0.40		0.40	2.5	mg/Kg	500	03-Jul-2018 02:02
1,1,2-Trichlor-1,2,2-trifluoroethane	< 0.35		0.35	2.5	mg/Kg	500	03-Jul-2018 02:02
1,1,2-Trichloroethane	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
1,1-Dichloroethane	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
1,2,4-Trichlorobenzene	< 0.50		0.50	2.5	mg/Kg	500	03-Jul-2018 02:02
1,2-Dibromo-3-chloropropane	< 0.50		0.50	2.5	mg/Kg	500	03-Jul-2018 02:02
1,2-Dibromoethane	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
1,2-Dichlorobenzene	< 0.50		0.50	2.5	mg/Kg	500	03-Jul-2018 02:02
1,2-Dichloroethane	< 0.30		0.30	2.5	mg/Kg	500	03-Jul-2018 02:02
1,2-Dichloropropane	< 0.40		0.40	2.5	mg/Kg	500	03-Jul-2018 02:02
1,3-Dichlorobenzene	< 0.50		0.50	2.5	mg/Kg	500	03-Jul-2018 02:02
1,4-Dichlorobenzene	< 0.50		0.50	2.5	mg/Kg	500	03-Jul-2018 02:02
2-Butanone	< 0.64		0.64	5.0	mg/Kg	500	03-Jul-2018 02:02
2-Chloroethyl vinyl ether	< 0.99		0.99	5.0	mg/Kg	500	03-Jul-2018 02:02
2-Hexanone	< 0.69		0.69	5.0	mg/Kg	500	03-Jul-2018 02:02
4-Methyl-2-pentanone	< 0.99		0.99	5.0	mg/Kg	500	03-Jul-2018 02:02
Acetone	< 0.99		0.99	9.9	mg/Kg	500	03-Jul-2018 02:02
Acrolein	< 0.99		0.99	9.9	mg/Kg	500	03-Jul-2018 02:02
Acrylonitrile	< 1.2		1.2	5.0	mg/Kg	500	03-Jul-2018 02:02
Benzene	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
Bromodichloromethane	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
Bromoform	< 0.30		0.30	2.5	mg/Kg	500	03-Jul-2018 02:02
Bromomethane	< 0.50		0.50	5.0	mg/Kg	500	03-Jul-2018 02:02
<b>Carbon disulfide</b>	<b>2.7</b>	J	<b>0.30</b>	<b>5.0</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02
<b>Carbon tetrachloride</b>	<b>4.3</b>		<b>0.30</b>	<b>2.5</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02
Chlorobenzene	< 0.30		0.30	2.5	mg/Kg	500	03-Jul-2018 02:02
Chloroethane	< 0.40		0.40	5.0	mg/Kg	500	03-Jul-2018 02:02
Chloroform	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
Chloromethane	< 0.25		0.25	5.0	mg/Kg	500	03-Jul-2018 02:02
cis-1,2-Dichloroethene	< 0.40		0.40	2.5	mg/Kg	500	03-Jul-2018 02:02
cis-1,3-Dichloropropene	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
Cyclohexane	< 0.50	n	0.50	2.5	mg/Kg	500	03-Jul-2018 02:02
Dibromochloromethane	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
Dichlorodifluoromethane	< 0.35		0.35	2.5	mg/Kg	500	03-Jul-2018 02:02
<b>Ethylbenzene</b>	<b>7.2</b>		<b>0.35</b>	<b>2.5</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02
<b>Isopropylbenzene</b>	<b>8.1</b>		<b>0.45</b>	<b>2.5</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02
<b>m,p-Xylene</b>	<b>26</b>		<b>0.79</b>	<b>5.0</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-01-180626  
 Collection Date: 26-Jun-2018 13:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>					
Methyl acetate	< 0.35		0.35	2.5	mg/Kg	500	03-Jul-2018 02:02
Methyl tert-butyl ether	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
Methylcyclohexane	< 0.50		0.50	2.5	mg/Kg	500	03-Jul-2018 02:02
Methylene chloride	< 0.50		0.50	5.0	mg/Kg	500	03-Jul-2018 02:02
<b>o-Xylene</b>	<b>10</b>		<b>0.50</b>	<b>2.5</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02
Styrene	< 0.35		0.35	2.5	mg/Kg	500	03-Jul-2018 02:02
Tetrachloroethene	< 0.35		0.35	2.5	mg/Kg	500	03-Jul-2018 02:02
<b>Toluene</b>	<b>6.8</b>		<b>0.30</b>	<b>2.5</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02
trans-1,2-Dichloroethene	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
trans-1,3-Dichloropropene	< 0.30		0.30	2.5	mg/Kg	500	03-Jul-2018 02:02
Trichloroethene	< 0.30		0.30	2.5	mg/Kg	500	03-Jul-2018 02:02
Trichlorofluoromethane	< 0.25		0.25	2.5	mg/Kg	500	03-Jul-2018 02:02
Vinyl chloride	< 0.40		0.40	0.99	mg/Kg	500	03-Jul-2018 02:02
<b>Xylenes, Total</b>	<b>37</b>		<b>0.50</b>	<b>2.5</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:02
<i>Surr: 1,2-Dichloroethane-d4</i>	104			70-126	%REC	500	03-Jul-2018 02:02
<i>Surr: 4-Bromofluorobenzene</i>	100			70-130	%REC	500	03-Jul-2018 02:02
<i>Surr: Dibromofluoromethane</i>	98.7			70-130	%REC	500	03-Jul-2018 02:02
<i>Surr: Toluene-d8</i>	102			70-130	%REC	500	03-Jul-2018 02:02
<b>TCLP SEMIVOLATILES</b>		<b>Method:SW1311/8270</b>		Leache:SW1311 / 28-Jun-2018	Prep:SW3510 / 29-Jun-2018	<b>Analyst: SGA</b>	
2,4,5-Trichlorophenol	< 0.00094		0.00094	0.0052	mg/L	1	29-Jun-2018 20:42
2,4,6-Trichlorophenol	< 0.0015		0.0015	0.0052	mg/L	1	29-Jun-2018 20:42
2,4-Dinitrotoluene	< 0.0010		0.0010	0.0052	mg/L	1	29-Jun-2018 20:42
<b>Cresols, Total</b>	<b>0.017</b>		<b>0.0021</b>	<b>0.016</b>	<b>mg/L</b>	1	29-Jun-2018 20:42
Hexachlorobenzene	< 0.0011		0.0011	0.0052	mg/L	1	29-Jun-2018 20:42
Hexachlorobutadiene	< 0.0011		0.0011	0.0052	mg/L	1	29-Jun-2018 20:42
Hexachloroethane	< 0.0010		0.0010	0.0052	mg/L	1	29-Jun-2018 20:42
Nitrobenzene	< 0.00083		0.00083	0.0052	mg/L	1	29-Jun-2018 20:42
Pentachlorophenol	< 0.0017		0.0017	0.0052	mg/L	1	29-Jun-2018 20:42
Pyridine	< 0.0021		0.0021	0.0052	mg/L	1	29-Jun-2018 20:42
<i>Surr: 2,4,6-Tribromophenol</i>	131			39-153	%REC	1	29-Jun-2018 20:42
<i>Surr: 2-Fluorobiphenyl</i>	89.1			40-147	%REC	1	29-Jun-2018 20:42
<i>Surr: 2-Fluorophenol</i>	86.5			21-110	%REC	1	29-Jun-2018 20:42
<i>Surr: 4-Terphenyl-d14</i>	98.4			39-141	%REC	1	29-Jun-2018 20:42
<i>Surr: Nitrobenzene-d5</i>	76.7			37-140	%REC	1	29-Jun-2018 20:42
<i>Surr: Phenol-d6</i>	95.4			11-110	%REC	1	29-Jun-2018 20:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-01-180626  
 Collection Date: 26-Jun-2018 13:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>				Method:SW8270		Prep:SW3541 / 28-Jun-2018	
<b>1,1'-Biphenyl</b>	<b>0.70</b>		<b>0.034</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
1,2-Diphenylhydrazine	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:42
2,4,5-Trichlorophenol	< 0.049		0.049	0.13	mg/Kg	10	03-Jul-2018 17:42
2,4,6-Trichlorophenol	< 0.034		0.034	0.13	mg/Kg	10	03-Jul-2018 17:42
2,4-Dichlorophenol	< 0.026		0.026	0.13	mg/Kg	10	03-Jul-2018 17:42
2,4-Dimethylphenol	< 0.065		0.065	0.13	mg/Kg	10	03-Jul-2018 17:42
2,4-Dinitrophenol	< 0.089		0.089	0.26	mg/Kg	10	03-Jul-2018 17:42
2,4-Dinitrotoluene	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:42
2,6-Dinitrotoluene	< 0.065		0.065	0.13	mg/Kg	10	03-Jul-2018 17:42
2-Chloronaphthalene	< 0.026		0.026	0.13	mg/Kg	10	03-Jul-2018 17:42
2-Chlorophenol	< 0.026		0.026	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>2-Methylnaphthalene</b>	<b>7.4</b>		<b>0.099</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:43
2-Methylphenol	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:42
2-Nitroaniline	< 0.038		0.038	0.13	mg/Kg	10	03-Jul-2018 17:42
2-Nitrophenol	< 0.049		0.049	0.13	mg/Kg	10	03-Jul-2018 17:42
3&4-Methylphenol	< 0.020		0.020	0.13	mg/Kg	10	03-Jul-2018 17:42
3,3'-Dichlorobenzidine	< 0.049		0.049	0.13	mg/Kg	10	03-Jul-2018 17:42
3-Nitroaniline	< 0.038		0.038	0.13	mg/Kg	10	03-Jul-2018 17:42
4,6-Dinitro-2-methylphenol	< 0.042		0.042	0.13	mg/Kg	10	03-Jul-2018 17:42
4-Bromophenyl phenyl ether	< 0.032		0.032	0.13	mg/Kg	10	03-Jul-2018 17:42
4-Chloro-3-methylphenol	< 0.014		0.014	0.13	mg/Kg	10	03-Jul-2018 17:42
4-Chloroaniline	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:42
4-Chlorophenyl phenyl ether	< 0.030		0.030	0.13	mg/Kg	10	03-Jul-2018 17:42
4-Nitroaniline	< 0.043		0.043	0.13	mg/Kg	10	03-Jul-2018 17:42
4-Nitrophenol	< 0.038		0.038	0.26	mg/Kg	10	03-Jul-2018 17:42
<b>Acenaphthene</b>	<b>0.54</b>		<b>0.0099</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Acenaphthylene	< 0.020		0.020	0.065	mg/Kg	10	03-Jul-2018 17:42
Acetophenone	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Anthracene</b>	<b>0.73</b>		<b>0.0099</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Atrazine	< 0.040		0.040	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Benz(a)anthracene</b>	<b>0.69</b>		<b>0.032</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Benzaldehyde	< 0.024	n	0.024	0.13	mg/Kg	10	03-Jul-2018 17:42
Benzidine	< 0.028		0.028	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Benzo(a)pyrene</b>	<b>0.37</b>		<b>0.020</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
<b>Benzo(b)fluoranthene</b>	<b>0.31</b>		<b>0.024</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
<b>Benzo(g,h,i)perylene</b>	<b>0.23</b>		<b>0.014</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
<b>Benzo(k)fluoranthene</b>	<b>0.14</b>		<b>0.018</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Bis(2-chloroethoxy)methane	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:42

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-01-180626  
 Collection Date: 26-Jun-2018 13:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>							
				<b>Method:SW8270</b>			
Bis(2-chloroethyl)ether	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:42
Bis(2-chloroisopropyl)ether	< 0.028		0.028	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Bis(2-ethylhexyl)phthalate</b>	<b>5.3</b>		<b>0.034</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Butyl benzyl phthalate	< 0.026		0.026	0.13	mg/Kg	10	03-Jul-2018 17:42
Caprolactam	< 0.024		0.024	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Carbazole</b>	<b>0.54</b>		<b>0.024</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
<b>Chrysene</b>	<b>0.97</b>		<b>0.016</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
<b>Di-n-butyl phthalate</b>	<b>2.6</b>		<b>0.024</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
<b>Di-n-octyl phthalate</b>	<b>0.18</b>		<b>0.018</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Dibenz(a,h)anthracene	< 0.032		0.032	0.065	mg/Kg	10	03-Jul-2018 17:42
Dibenzofuran	< 0.014		0.014	0.065	mg/Kg	10	03-Jul-2018 17:42
Diethyl phthalate	< 0.020		0.020	0.13	mg/Kg	10	03-Jul-2018 17:42
Dimethyl phthalate	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Fluoranthene</b>	<b>1.1</b>		<b>0.022</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
<b>Fluorene</b>	<b>0.85</b>		<b>0.022</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Hexachlorobenzene	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:42
Hexachlorobutadiene	< 0.024		0.024	0.13	mg/Kg	10	03-Jul-2018 17:42
Hexachlorocyclopentadiene	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:42
Hexachloroethane	< 0.030		0.030	0.13	mg/Kg	10	03-Jul-2018 17:42
Indeno(1,2,3-cd)pyrene	< 0.016		0.016	0.065	mg/Kg	10	03-Jul-2018 17:42
Isophorone	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:42
N-Nitrosodi-n-propylamine	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:42
N-Nitrosodimethylamine	< 0.024		0.024	0.13	mg/Kg	10	03-Jul-2018 17:42
N-Nitrosodiphenylamine	< 0.014		0.014	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Naphthalene</b>	<b>9.4</b>		<b>0.12</b>	<b>0.65</b>	<b>mg/Kg</b>	100	03-Jul-2018 16:43
Nitrobenzene	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:42
Pentachlorophenol	< 0.065		0.065	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Phenanthrene</b>	<b>3.0</b>		<b>0.030</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Phenol	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:42
<b>Pyrene</b>	<b>1.5</b>		<b>0.012</b>	<b>0.065</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:42
Pyridine	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:42
<i>Surr: 2,4,6-Tribromophenol</i>	53.4			36-126	%REC	10	03-Jul-2018 17:42
<i>Surr: 2,4,6-Tribromophenol</i>	0	S		36-126	%REC	100	03-Jul-2018 16:43
<i>Surr: 2-Fluorobiphenyl</i>	0	S		43-125	%REC	100	03-Jul-2018 16:43
<i>Surr: 2-Fluorobiphenyl</i>	110			43-125	%REC	10	03-Jul-2018 17:42
<i>Surr: 2-Fluorophenol</i>	52.8			37-125	%REC	10	03-Jul-2018 17:42
<i>Surr: 2-Fluorophenol</i>	0	S		37-125	%REC	100	03-Jul-2018 16:43
<i>Surr: 4-Terphenyl-d14</i>	0	S		32-125	%REC	100	03-Jul-2018 16:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-01-180626  
 Collection Date: 26-Jun-2018 13:30

**ANALYTICAL REPORT**

WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>		<b>Method:SW8270</b>					Prep:SW3541 / 28-Jun-2018 Analyst: ACN
Surr: 4-Terphenyl-d14	121			32-125	%REC	10	03-Jul-2018 17:42
Surr: Nitrobenzene-d5	113			37-125	%REC	10	03-Jul-2018 17:42
Surr: Nitrobenzene-d5	0	S		37-125	%REC	100	03-Jul-2018 16:43
Surr: Phenol-d6	0	S		40-125	%REC	100	03-Jul-2018 16:43
Surr: Phenol-d6	97.9			40-125	%REC	10	03-Jul-2018 17:42
<b>TEXAS TPH BY TX1005</b>		<b>Method:TX1005</b>					Prep:TX1005PR / 28-Jun-2018 Analyst: MBG
nC6 to nC12	5,000		300	2000	mg/Kg	20	03-Jul-2018 09:34
>nC12 to nC28	17,000		390	2000	mg/Kg	20	03-Jul-2018 09:34
>nC28 to nC35	2,900		390	2000	mg/Kg	20	03-Jul-2018 09:34
Total Petroleum Hydrocarbon	24,900		300	2000	mg/Kg	20	03-Jul-2018 09:34
Surr: 2-Fluorobiphenyl	0	S		70-130	%REC	20	03-Jul-2018 09:34
Surr: Trifluoromethyl benzene	0	S		70-130	%REC	20	03-Jul-2018 09:34
<b>TCLP PESTICIDES BY SW8081B</b>		<b>Method:SW1311/8081A</b>			Leache:SW1311 / 28-Jun-2018	Prep:SW3510C/3665A / 28-Jun-2018	Analyst: STH
Chlordane	< 0.00021		0.00021	0.00052	mg/L	1	03-Jul-2018 03:31
Endrin	< 0.000031		0.000031	0.00010	mg/L	1	03-Jul-2018 03:31
gamma-BHC	0.000094	P	0.000010	0.000052	mg/L	1	03-Jul-2018 03:31
Heptachlor	0.000041	J	0.000010	0.000052	mg/L	1	03-Jul-2018 03:31
Heptachlor epoxide	< 0.000010		0.000010	0.000052	mg/L	1	03-Jul-2018 03:31
Methoxychlor	< 0.00016		0.00016	0.00052	mg/L	1	03-Jul-2018 03:31
Toxaphene	< 0.00021		0.00021	0.00052	mg/L	1	03-Jul-2018 03:31
Surr: Decachlorobiphenyl	114			30-150	%REC	1	03-Jul-2018 03:31
Surr: Tetrachloro-m-xylene	112			30-150	%REC	1	03-Jul-2018 03:31
<b>TCLP HERBICIDES BY SW8151A</b>		<b>Method:SW1311/8150</b>			Leache:SW1311 / 28-Jun-2018	Prep:SW8151 / 28-Jun-2018	Analyst: STH
2,4,5-TP (Silvex)	< 0.000053		0.000053	0.00021	mg/L	1	30-Jun-2018 15:41
2,4-D	0.0013		0.000063	0.00021	mg/L	1	30-Jun-2018 15:41
Surr: DCAA	73.3			40-140	%REC	1	30-Jun-2018 15:41

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-01-180626  
 Collection Date: 26-Jun-2018 13:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>ORGANOCHLORINE PESTICIDES BY SW8081B</b>							
			<b>Method:SW8081</b>				
4,4'-DDD	< 0.00099		0.00099	0.0066	mg/Kg	1	06-Jul-2018 03:08
4,4'-DDE	< 0.00099		0.00099	0.0066	mg/Kg	1	06-Jul-2018 03:08
<b>4,4'-DDT</b>	<b>0.0060</b>	JP	<b>0.00099</b>	<b>0.0066</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:08
<b>Aldrin</b>	<b>0.0068</b>	P	<b>0.00060</b>	<b>0.0033</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:08
alpha-BHC	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:08
beta-BHC	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:08
Chlordane	< 0.0040		0.0040	0.033	mg/Kg	1	06-Jul-2018 03:08
delta-BHC	< 0.00040		0.00040	0.0033	mg/Kg	1	06-Jul-2018 03:08
Dieldrin	< 0.00099		0.00099	0.0066	mg/Kg	1	06-Jul-2018 03:08
Endosulfan I	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:08
<b>Endosulfan II</b>	<b>0.0018</b>	J	<b>0.0012</b>	<b>0.0066</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:08
Endosulfan sulfate	< 0.0012		0.0012	0.0066	mg/Kg	1	06-Jul-2018 03:08
<b>Endrin</b>	<b>0.0020</b>	J	<b>0.0012</b>	<b>0.0066</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:08
<b>Endrin aldehyde</b>	<b>0.0019</b>	J	<b>0.0012</b>	<b>0.0066</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:08
gamma-BHC	< 0.00040		0.00040	0.0033	mg/Kg	1	06-Jul-2018 03:08
Heptachlor	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:08
Heptachlor epoxide	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:08
<b>Methoxychlor</b>	<b>0.016</b>	J	<b>0.0068</b>	<b>0.033</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:08
Toxaphene	< 0.0095		0.0095	0.033	mg/Kg	1	06-Jul-2018 03:08
<i>Surr: Decachlorobiphenyl</i>	124			59-144	%REC	1	06-Jul-2018 03:08
<i>Surr: Tetrachloro-m-xylene</i>	109			56.9-130	%REC	1	06-Jul-2018 03:08
<b>CHLORINATED HERBICIDES BY SW8151A</b>							
			<b>Method:SW8151</b>				
2,4,5-TP (Silvex)	< 0.0034		0.0034	0.0066	mg/Kg	1	04-Jul-2018 00:29
2,4-D	< 0.0014		0.0014	0.013	mg/Kg	1	04-Jul-2018 00:29
<i>Surr: DCAA</i>	129			30-150	%REC	1	04-Jul-2018 00:29
<b>TRIVALENT CHROMIUM</b>							
			<b>Method:Calculation</b>				
Chromium, Trivalent	<b>10.4</b>	n	<b>0.700</b>	<b>5.00</b>	<b>mg/Kg</b>	1	03-Jul-2018 17:48
<b>TCLP METALS BY SW6020A</b>							
			<b>Method:SW1311/6020</b>	Leache:SW1311 / 28-Jun-2018	Prep:SW3010A / 28-Jun-2018		
Arsenic	<b>0.00634</b>	J	<b>0.00400</b>	<b>0.0500</b>	<b>mg/L</b>	1	29-Jun-2018 00:23
Barium	<b>0.0350</b>	J	<b>0.0190</b>	<b>0.200</b>	<b>mg/L</b>	1	29-Jun-2018 00:23
Cadmium	< 0.00200		0.00200	0.0500	mg/L	1	29-Jun-2018 00:23
<b>Chromium</b>	<b>0.0215</b>	J	<b>0.00400</b>	<b>0.0500</b>	<b>mg/L</b>	1	29-Jun-2018 00:23
Lead	< 0.00600		0.00600	0.0500	mg/L	1	29-Jun-2018 00:23
Selenium	< 0.0110		0.0110	0.0500	mg/L	1	29-Jun-2018 00:23
Silver	< 0.00200		0.00200	0.0500	mg/L	1	29-Jun-2018 00:23

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-01-180626  
 Collection Date: 26-Jun-2018 13:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>METALS BY SW6020A</b>							
				<b>Method:SW6020</b>			
Antimony	4.02		0.0624	0.480	mg/Kg	1	27-Jun-2018 21:13
Arsenic	1.55		0.0672	0.480	mg/Kg	1	27-Jun-2018 21:13
Barium	66.8		0.0288	0.480	mg/Kg	1	27-Jun-2018 21:13
Beryllium	0.0474	J	0.0202	0.480	mg/Kg	1	27-Jun-2018 21:13
Boron	21.5		0.739	2.40	mg/Kg	1	27-Jun-2018 21:13
Cadmium	0.254	J	0.0259	0.480	mg/Kg	1	27-Jun-2018 21:13
Chromium	10.4		0.0221	0.480	mg/Kg	1	27-Jun-2018 21:13
Cobalt	1.95		0.0144	0.480	mg/Kg	1	27-Jun-2018 21:13
Copper	246		0.730	3.84	mg/Kg	20	28-Jun-2018 11:00
Lead	5.58		0.0125	0.480	mg/Kg	1	27-Jun-2018 21:13
Molybdenum	27.4		0.0173	0.480	mg/Kg	1	27-Jun-2018 21:13
Nickel	23.3		0.0461	0.480	mg/Kg	1	27-Jun-2018 21:13
Selenium	2.43		0.0874	0.480	mg/Kg	1	27-Jun-2018 21:13
Silver	0.353	J	0.0144	0.480	mg/Kg	1	27-Jun-2018 21:13
Thallium	< 0.214		0.214	0.480	mg/Kg	1	27-Jun-2018 21:13
Tin	3.92		0.0615	1.44	mg/Kg	1	27-Jun-2018 21:13
Titanium	31.5		0.0384	0.480	mg/Kg	1	27-Jun-2018 21:13
Vanadium	9.47		0.0720	0.480	mg/Kg	1	27-Jun-2018 21:13
Zinc	281		3.26	9.60	mg/Kg	20	28-Jun-2018 11:00
<b>TCLP MERCURY BY SW7470A</b>							
				<b>Method:SW7470</b>	Leache:SW1311 / 28-Jun-2018	Prep:SW7470 / 29-Jun-2018	Analyst: JCJ
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	30-Jun-2018 11:36
<b>MERCURY BY SW7471B</b>							
				<b>Method:SW7471A</b>		Prep:SW7471A / 03-Jul-2018	Analyst: JBA
Mercury	0.878		0.00247	0.0175	mg/Kg	5	03-Jul-2018 14:15
<b>OIL AND GREASE BY E1664A</b>							
				<b>Method:E1664</b>		Prep:E1664 / 27-Jun-2018	Analyst: KAH
Oil and Grease	6,860		100	100	mg/Kg	1	02-Jul-2018 14:30
<b>BURN RATE BY METHOD SW1030</b>							
				<b>Method:SW1030</b>			Analyst: KAH
Ignitability, Solid	Negative		0	0	Burn Rate, mm/sec	1	02-Jul-2018 14:30
<b>REACTIVE CYANIDE</b>							
				<b>Method:SW7.3.3.2</b>		Prep:SW7.3.3.2	Analyst: MZD
Reactive Cyanide	< 100	n	100	100	mg/Kg	1	29-Jun-2018 16:46
<b>REACTIVE SULFIDE</b>							
				<b>Method:SW7.3.4.2</b>			Analyst: MZD
Reactive Sulfide	< 100	n	100	100	mg/Kg	1	29-Jun-2018 16:36
<b>HEXAVALENT CHROMIUM BY SW7196A</b>							
				<b>Method:SW7196</b>		Prep:SW3060A / 02-Jul-2018	Analyst: JHD
Chromium, Hexavalent	< 0.299		0.299	1.99	mg/kg	1	02-Jul-2018 14:15
<b>CYANIDE</b>							
				<b>Method:SW9014</b>		Prep:SW9010C / 28-Jun-2018	Analyst: KVL
Cyanide	< 0.289		0.289	1.93	mg/Kg	1	28-Jun-2018 13:20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-01-180626  
 Collection Date: 26-Jun-2018 13:30

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-02  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH SOIL BY SW9045D</b> <b>Method:SW9045B</b>							Analyst: KVL
pH	7.61	H	0.100	0.100	pH Units	1	27-Jun-2018 14:45
Temp Deg C @pH	27.7	H	0	0	°C	1	27-Jun-2018 14:45
<b>TOTAL ORGANIC CARBON BY SW9060A</b> <b>Method:SW9060</b>						Prep:SW9060 / 29-Jun-2018	Analyst: KMU
Total Organic Carbon	28.3		0.0600	0.0600	wt%-dry	1	02-Jul-2018 14:00
<b>PHENOLICS</b> <b>Method:SW9065</b>						Prep:SW9065 / 02-Jul-2018	Analyst: MZD
Phenolics, Total Recoverable	8.63		0.998	2.49	mg/kg	1	02-Jul-2018 15:49
<b>SUB ANALYSIS AVAILABLE CYANIDE - EPA OIA-1667</b> <b>Method:NA</b>							Analyst: SUBHO
Subcontract Analysis	See Attached		0		NA	1	02-Jul-2018 08:34
<b>SUBCONTRACT ANALYSIS - METALS ANALYSIS</b> <b>Method:NA</b>							Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	05-Jul-2018 14:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TCLP VOLATILES</b>							
			<b>Method:SW1311/8260B</b>	Leache:SW1311 / 28-Jun-2018		Prep:SW1311 / 28-Jun-2018	Analyst: PC
1,1-Dichloroethene	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 03:07
1,2-Dichloroethane	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 03:07
1,4-Dichlorobenzene	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 03:07
2-Butanone	< 0.020		0.020	0.20	mg/L	20	03-Jul-2018 03:07
Benzene	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 03:07
Carbon tetrachloride	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 03:07
Chlorobenzene	< 0.0080		0.0080	0.10	mg/L	20	03-Jul-2018 03:07
Chloroform	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 03:07
Tetrachloroethene	< 0.012		0.012	0.10	mg/L	20	03-Jul-2018 03:07
Trichloroethene	< 0.010		0.010	0.10	mg/L	20	03-Jul-2018 03:07
Vinyl chloride	< 0.0080		0.0080	0.040	mg/L	20	03-Jul-2018 03:07
<i>Surr: 1,2-Dichloroethane-d4</i>	88.2			70-126	%REC	20	03-Jul-2018 03:07
<i>Surr: 4-Bromofluorobenzene</i>	103			82-124	%REC	20	03-Jul-2018 03:07
<i>Surr: Dibromofluoromethane</i>	103			77-123	%REC	20	03-Jul-2018 03:07
<i>Surr: Toluene-d8</i>	106			82-127	%REC	20	03-Jul-2018 03:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>					
1,1,1-Trichloroethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
1,1,2,2-Tetrachloroethane	< 0.39		0.39	2.4	mg/Kg	500	03-Jul-2018 02:27
1,1,2-Trichlor-1,2,2-trifluoroethane	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 02:27
1,1,2-Trichloroethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
1,1-Dichloroethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
1,2,4-Trichlorobenzene	< 0.49		0.49	2.4	mg/Kg	500	03-Jul-2018 02:27
1,2-Dibromo-3-chloropropane	< 0.49		0.49	2.4	mg/Kg	500	03-Jul-2018 02:27
1,2-Dibromoethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
1,2-Dichlorobenzene	< 0.49		0.49	2.4	mg/Kg	500	03-Jul-2018 02:27
1,2-Dichloroethane	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 02:27
1,2-Dichloropropane	< 0.39		0.39	2.4	mg/Kg	500	03-Jul-2018 02:27
1,3-Dichlorobenzene	< 0.49		0.49	2.4	mg/Kg	500	03-Jul-2018 02:27
1,4-Dichlorobenzene	< 0.49		0.49	2.4	mg/Kg	500	03-Jul-2018 02:27
2-Butanone	< 0.64		0.64	4.9	mg/Kg	500	03-Jul-2018 02:27
2-Chloroethyl vinyl ether	< 0.98		0.98	4.9	mg/Kg	500	03-Jul-2018 02:27
2-Hexanone	< 0.69		0.69	4.9	mg/Kg	500	03-Jul-2018 02:27
4-Methyl-2-pentanone	< 0.98		0.98	4.9	mg/Kg	500	03-Jul-2018 02:27
Acetone	< 0.98		0.98	9.8	mg/Kg	500	03-Jul-2018 02:27
Acrolein	< 0.98		0.98	9.8	mg/Kg	500	03-Jul-2018 02:27
Acrylonitrile	< 1.2		1.2	4.9	mg/Kg	500	03-Jul-2018 02:27
<b>Benzene</b>	<b>2.2</b>	J	<b>0.24</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27
Bromodichloromethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
Bromoform	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 02:27
Bromomethane	< 0.49		0.49	4.9	mg/Kg	500	03-Jul-2018 02:27
Carbon disulfide	< 0.29		0.29	4.9	mg/Kg	500	03-Jul-2018 02:27
Carbon tetrachloride	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 02:27
Chlorobenzene	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 02:27
Chloroethane	< 0.39		0.39	4.9	mg/Kg	500	03-Jul-2018 02:27
Chloroform	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
Chloromethane	< 0.24		0.24	4.9	mg/Kg	500	03-Jul-2018 02:27
cis-1,2-Dichloroethene	< 0.39		0.39	2.4	mg/Kg	500	03-Jul-2018 02:27
cis-1,3-Dichloropropene	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
Cyclohexane	< 0.49	n	0.49	2.4	mg/Kg	500	03-Jul-2018 02:27
Dibromochloromethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
Dichlorodifluoromethane	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 02:27
<b>Ethylbenzene</b>	<b>51</b>		<b>0.34</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27
<b>Isopropylbenzene</b>	<b>11</b>		<b>0.44</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27
<b>m,p-Xylene</b>	<b>200</b>		<b>0.78</b>	<b>4.9</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>					
Methyl acetate	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 02:27
Methyl tert-butyl ether	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
<b>Methylcyclohexane</b>	<b>3.9</b>		<b>0.49</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27
Methylene chloride	< 0.49		0.49	4.9	mg/Kg	500	03-Jul-2018 02:27
<b>o-Xylene</b>	<b>87</b>		<b>0.49</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27
Styrene	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 02:27
Tetrachloroethene	< 0.34		0.34	2.4	mg/Kg	500	03-Jul-2018 02:27
<b>Toluene</b>	<b>18</b>		<b>0.29</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27
trans-1,2-Dichloroethene	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
trans-1,3-Dichloropropene	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 02:27
Trichloroethene	< 0.29		0.29	2.4	mg/Kg	500	03-Jul-2018 02:27
Trichlorofluoromethane	< 0.24		0.24	2.4	mg/Kg	500	03-Jul-2018 02:27
Vinyl chloride	< 0.39		0.39	0.98	mg/Kg	500	03-Jul-2018 02:27
<b>Xylenes, Total</b>	<b>280</b>		<b>0.49</b>	<b>2.4</b>	<b>mg/Kg</b>	500	03-Jul-2018 02:27
<i>Surr: 1,2-Dichloroethane-d4</i>	104			70-126	%REC	500	03-Jul-2018 02:27
<i>Surr: 4-Bromofluorobenzene</i>	112			70-130	%REC	500	03-Jul-2018 02:27
<i>Surr: Dibromofluoromethane</i>	98.8			70-130	%REC	500	03-Jul-2018 02:27
<i>Surr: Toluene-d8</i>	93.9			70-130	%REC	500	03-Jul-2018 02:27
<b>TCLP SEMIVOLATILES</b>		<b>Method:SW1311/8270</b>		Leache:SW1311 / 28-Jun-2018	Prep:SW3510 / 29-Jun-2018	<b>Analyst: SGA</b>	
2,4,5-Trichlorophenol	< 0.0014		0.0014	0.0077	mg/L	1	02-Jul-2018 16:43
2,4,6-Trichlorophenol	< 0.0021		0.0021	0.0077	mg/L	1	02-Jul-2018 16:43
2,4-Dinitrotoluene	< 0.0015		0.0015	0.0077	mg/L	1	02-Jul-2018 16:43
<b>Cresols, Total</b>	<b>0.0062</b>	J	<b>0.0031</b>	<b>0.023</b>	<b>mg/L</b>	1	02-Jul-2018 16:43
Hexachlorobenzene	< 0.0017		0.0017	0.0077	mg/L	1	02-Jul-2018 16:43
Hexachlorobutadiene	< 0.0017		0.0017	0.0077	mg/L	1	02-Jul-2018 16:43
Hexachloroethane	< 0.0015		0.0015	0.0077	mg/L	1	02-Jul-2018 16:43
Nitrobenzene	< 0.0012		0.0012	0.0077	mg/L	1	02-Jul-2018 16:43
Pentachlorophenol	< 0.0024		0.0024	0.0077	mg/L	1	02-Jul-2018 16:43
Pyridine	< 0.0031		0.0031	0.0077	mg/L	1	02-Jul-2018 16:43
<i>Surr: 2,4,6-Tribromophenol</i>	127			39-153	%REC	1	02-Jul-2018 16:43
<i>Surr: 2-Fluorobiphenyl</i>	98.9			40-147	%REC	1	02-Jul-2018 16:43
<i>Surr: 2-Fluorophenol</i>	73.0			21-110	%REC	1	02-Jul-2018 16:43
<i>Surr: 4-Terphenyl-d14</i>	126			39-141	%REC	1	02-Jul-2018 16:43
<i>Surr: Nitrobenzene-d5</i>	79.3			37-140	%REC	1	02-Jul-2018 16:43
<i>Surr: Phenol-d6</i>	86.3			11-110	%REC	1	02-Jul-2018 16:43

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>		<b>Method:SW8270</b>					Prep:SW3541 / 28-Jun-2018      Analyst: ACN
<b>1,1'-Biphenyl</b>	<b>0.50</b>		<b>0.034</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
1,2-Diphenylhydrazine	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:03
2,4,5-Trichlorophenol	< 0.050		0.050	0.13	mg/Kg	10	03-Jul-2018 17:03
2,4,6-Trichlorophenol	< 0.034		0.034	0.13	mg/Kg	10	03-Jul-2018 17:03
2,4-Dichlorophenol	< 0.026		0.026	0.13	mg/Kg	10	03-Jul-2018 17:03
2,4-Dimethylphenol	< 0.066		0.066	0.13	mg/Kg	10	03-Jul-2018 17:03
2,4-Dinitrophenol	< 0.089		0.089	0.26	mg/Kg	10	03-Jul-2018 17:03
2,4-Dinitrotoluene	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:03
2,6-Dinitrotoluene	< 0.066		0.066	0.13	mg/Kg	10	03-Jul-2018 17:03
2-Chloronaphthalene	< 0.026		0.026	0.13	mg/Kg	10	03-Jul-2018 17:03
2-Chlorophenol	< 0.026		0.026	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>2-Methylnaphthalene</b>	<b>2.5</b>		<b>0.0099</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
<b>2-Methylphenol</b>	<b>0.11</b>	J	<b>0.022</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
2-Nitroaniline	< 0.038		0.038	0.13	mg/Kg	10	03-Jul-2018 17:03
2-Nitrophenol	< 0.050		0.050	0.13	mg/Kg	10	03-Jul-2018 17:03
3&4-Methylphenol	< 0.020		0.020	0.13	mg/Kg	10	03-Jul-2018 17:03
3,3'-Dichlorobenzidine	< 0.050		0.050	0.13	mg/Kg	10	03-Jul-2018 17:03
3-Nitroaniline	< 0.038		0.038	0.13	mg/Kg	10	03-Jul-2018 17:03
4,6-Dinitro-2-methylphenol	< 0.042		0.042	0.13	mg/Kg	10	03-Jul-2018 17:03
4-Bromophenyl phenyl ether	< 0.032		0.032	0.13	mg/Kg	10	03-Jul-2018 17:03
4-Chloro-3-methylphenol	< 0.014		0.014	0.13	mg/Kg	10	03-Jul-2018 17:03
4-Chloroaniline	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:03
4-Chlorophenyl phenyl ether	< 0.030		0.030	0.13	mg/Kg	10	03-Jul-2018 17:03
4-Nitroaniline	< 0.044		0.044	0.13	mg/Kg	10	03-Jul-2018 17:03
4-Nitrophenol	< 0.038		0.038	0.26	mg/Kg	10	03-Jul-2018 17:03
<b>Acenaphthene</b>	<b>0.21</b>		<b>0.0099</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Acenaphthylene	< 0.020		0.020	0.066	mg/Kg	10	03-Jul-2018 17:03
Acetophenone	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Anthracene</b>	<b>0.11</b>		<b>0.0099</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Atrazine	< 0.040		0.040	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Benz(a)anthracene</b>	<b>0.23</b>		<b>0.032</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Benzaldehyde	< 0.024	n	0.024	0.13	mg/Kg	10	03-Jul-2018 17:03
Benzidine	< 0.028		0.028	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Benzo(a)pyrene</b>	<b>0.19</b>		<b>0.020</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
<b>Benzo(b)fluoranthene</b>	<b>0.072</b>		<b>0.024</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
<b>Benzo(g,h,i)perylene</b>	<b>0.17</b>		<b>0.014</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
<b>Benzo(k)fluoranthene</b>	<b>0.044</b>	J	<b>0.018</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Bis(2-chloroethoxy)methane	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW-LEVEL SEMIVOLATILES BY 8270D</b>							
				<b>Method:SW8270</b>			
Bis(2-chloroethyl)ether	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:03
Bis(2-chloroisopropyl)ether	< 0.028		0.028	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Bis(2-ethylhexyl)phthalate</b>	<b>1.1</b>		<b>0.034</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
<b>Butyl benzyl phthalate</b>	<b>0.14</b>		<b>0.026</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Caprolactam	< 0.024		0.024	0.13	mg/Kg	10	03-Jul-2018 17:03
Carbazole	< 0.024		0.024	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Chrysene</b>	<b>0.37</b>		<b>0.016</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
<b>Di-n-butyl phthalate</b>	<b>0.30</b>		<b>0.024</b>	<b>0.13</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Di-n-octyl phthalate	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Dibenz(a,h)anthracene</b>	<b>0.053</b>	J	<b>0.032</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Dibenzofuran	< 0.014		0.014	0.066	mg/Kg	10	03-Jul-2018 17:03
Diethyl phthalate	< 0.020		0.020	0.13	mg/Kg	10	03-Jul-2018 17:03
Dimethyl phthalate	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Fluoranthene</b>	<b>0.13</b>		<b>0.022</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
<b>Fluorene</b>	<b>0.30</b>		<b>0.022</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Hexachlorobenzene	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:03
Hexachlorobutadiene	< 0.024		0.024	0.13	mg/Kg	10	03-Jul-2018 17:03
Hexachlorocyclopentadiene	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:03
Hexachloroethane	< 0.030		0.030	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Indeno(1,2,3-cd)pyrene</b>	<b>0.090</b>		<b>0.016</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Isophorone	< 0.016		0.016	0.13	mg/Kg	10	03-Jul-2018 17:03
N-Nitrosodi-n-propylamine	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:03
N-Nitrosodimethylamine	< 0.024		0.024	0.13	mg/Kg	10	03-Jul-2018 17:03
N-Nitrosodiphenylamine	< 0.014		0.014	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Naphthalene</b>	<b>3.1</b>		<b>0.012</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Nitrobenzene	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:03
Pentachlorophenol	< 0.066		0.066	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Phenanthrene</b>	<b>0.75</b>		<b>0.030</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Phenol	< 0.022		0.022	0.13	mg/Kg	10	03-Jul-2018 17:03
<b>Pyrene</b>	<b>0.49</b>		<b>0.012</b>	<b>0.066</b>	<b>mg/Kg</b>	10	03-Jul-2018 17:03
Pyridine	< 0.018		0.018	0.13	mg/Kg	10	03-Jul-2018 17:03
<i>Surr: 2,4,6-Tribromophenol</i>	84.3			36-126	%REC	10	03-Jul-2018 17:03
<i>Surr: 2-Fluorobiphenyl</i>	99.9			43-125	%REC	10	03-Jul-2018 17:03
<i>Surr: 2-Fluorophenol</i>	94.7			37-125	%REC	10	03-Jul-2018 17:03
<i>Surr: 4-Terphenyl-d14</i>	119			32-125	%REC	10	03-Jul-2018 17:03
<i>Surr: Nitrobenzene-d5</i>	116			37-125	%REC	10	03-Jul-2018 17:03
<i>Surr: Phenol-d6</i>	114			40-125	%REC	10	03-Jul-2018 17:03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>TEXAS TPH BY TX1005</b>							
nC6 to nC12	910		100	680	mg/Kg	10	29-Jun-2018 19:36
>nC12 to nC28	4,800		130	680	mg/Kg	10	29-Jun-2018 19:36
>nC28 to nC35	1,100		130	680	mg/Kg	10	29-Jun-2018 19:36
Total Petroleum Hydrocarbon	6,810		100	680	mg/Kg	10	29-Jun-2018 19:36
Surr: 2-Fluorobiphenyl	101			70-130	%REC	10	29-Jun-2018 19:36
Surr: Trifluoromethyl benzene	119			70-130	%REC	10	29-Jun-2018 19:36
<b>TCLP PESTICIDES BY SW8081B</b>							
				Method:SW1311/8081A	Leache:SW1311 / 28-Jun-2018	Prep:SW3510C/3665A / 28-Jun-2018	Analyst: STH
Chlordane	< 0.000020		0.000020		mg/L	1	03-Jul-2018 01:45
Endrin	< 0.000031		0.000031		mg/L	1	03-Jul-2018 01:45
gamma-BHC	< 0.000010		0.000010		mg/L	1	03-Jul-2018 01:45
Heptachlor	< 0.000010		0.000010		mg/L	1	03-Jul-2018 01:45
Heptachlor epoxide	< 0.000010		0.000010		mg/L	1	03-Jul-2018 01:45
Methoxychlor	< 0.000015		0.000015		mg/L	1	03-Jul-2018 01:45
Toxaphene	< 0.000020		0.000020		mg/L	1	03-Jul-2018 01:45
Surr: Decachlorobiphenyl	124			30-150	%REC	1	03-Jul-2018 01:45
Surr: Tetrachloro-m-xylene	116			30-150	%REC	1	03-Jul-2018 01:45
<b>TCLP HERBICIDES BY SW8151A</b>							
				Method:SW1311/8150	Leache:SW1311 / 28-Jun-2018	Prep:SW8151 / 28-Jun-2018	Analyst: STH
2,4,5-TP (Silvex)	< 0.000051		0.000051		mg/L	1	30-Jun-2018 09:25
2,4-D	< 0.000061		0.000061		mg/L	1	30-Jun-2018 09:25
Surr: DCAA	89.3			40-140	%REC	1	30-Jun-2018 09:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>ORGANOCHLORINE PESTICIDES BY SW8081B</b>							
			<b>Method:SW8081</b>				
4,4'-DDD	< 0.0010		0.0010	0.0066	mg/Kg	1	06-Jul-2018 03:44
4,4'-DDE	< 0.0010		0.0010	0.0066	mg/Kg	1	06-Jul-2018 03:44
4,4'-DDT	< 0.0010		0.0010	0.0066	mg/Kg	1	06-Jul-2018 03:44
Aldrin	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:44
alpha-BHC	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:44
<b>beta-BHC</b>	<b>0.014</b>	P	<b>0.00060</b>	<b>0.0033</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:44
Chlordane	< 0.0040		0.0040	0.033	mg/Kg	1	06-Jul-2018 03:44
delta-BHC	< 0.00040		0.00040	0.0033	mg/Kg	1	06-Jul-2018 03:44
Dieldrin	< 0.0010		0.0010	0.0066	mg/Kg	1	06-Jul-2018 03:44
Endosulfan I	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:44
<b>Endosulfan II</b>	<b>0.0054</b>	J	<b>0.0012</b>	<b>0.0066</b>	<b>mg/Kg</b>	1	06-Jul-2018 03:44
Endosulfan sulfate	< 0.0012		0.0012	0.0066	mg/Kg	1	06-Jul-2018 03:44
Endrin	< 0.0012		0.0012	0.0066	mg/Kg	1	06-Jul-2018 03:44
Endrin aldehyde	< 0.0012		0.0012	0.0066	mg/Kg	1	06-Jul-2018 03:44
gamma-BHC	< 0.00040		0.00040	0.0033	mg/Kg	1	06-Jul-2018 03:44
Heptachlor	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:44
Heptachlor epoxide	< 0.00060		0.00060	0.0033	mg/Kg	1	06-Jul-2018 03:44
Methoxychlor	< 0.0068		0.0068	0.033	mg/Kg	1	06-Jul-2018 03:44
Toxaphene	< 0.0096		0.0096	0.033	mg/Kg	1	06-Jul-2018 03:44
<i>Surr: Decachlorobiphenyl</i>	117			59-144	%REC	1	06-Jul-2018 03:44
<i>Surr: Tetrachloro-m-xylene</i>	93.8			56.9-130	%REC	1	06-Jul-2018 03:44
<b>CHLORINATED HERBICIDES BY SW8151A</b>							
			<b>Method:SW8151</b>				
2,4,5-TP (Silvex)	< 0.0034		0.0034	0.0066	mg/Kg	1	04-Jul-2018 01:00
2,4-D	< 0.0014		0.0014	0.013	mg/Kg	1	04-Jul-2018 01:00
<i>Surr: DCAA</i>	115			30-150	%REC	1	04-Jul-2018 01:00
<b>TRIVALENT CHROMIUM</b>							
			<b>Method:Calculation</b>				
Chromium, Trivalent	<b>6.86</b>	n	<b>0.700</b>	<b>5.00</b>	<b>mg/Kg</b>	1	03-Jul-2018 17:48
<b>TCLP METALS BY SW6020A</b>							
			<b>Method:SW1311/6020</b>	Leache:SW1311 / 28-Jun-2018	Prep:SW3010A / 28-Jun-2018		
Arsenic	<b>0.0139</b>	J	<b>0.00400</b>	<b>0.0500</b>	<b>mg/L</b>	1	29-Jun-2018 00:25
Barium	<b>0.0837</b>	J	<b>0.0190</b>	<b>0.200</b>	<b>mg/L</b>	1	29-Jun-2018 00:25
Cadmium	< 0.00200		0.00200	0.0500	mg/L	1	29-Jun-2018 00:25
Chromium	< 0.00400		0.00400	0.0500	mg/L	1	29-Jun-2018 00:25
Lead	< 0.00600		0.00600	0.0500	mg/L	1	29-Jun-2018 00:25
Selenium	< 0.0110		0.0110	0.0500	mg/L	1	29-Jun-2018 00:25
Silver	< 0.00200		0.00200	0.0500	mg/L	1	29-Jun-2018 00:25

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**

WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>METALS BY SW6020A</b>							
				<b>Method:SW6020</b>			
Antimony	4.52		0.0611	0.470	mg/Kg	1	27-Jun-2018 21:15
Arsenic	1.60		0.0658	0.470	mg/Kg	1	27-Jun-2018 21:15
Barium	60.1		0.0282	0.470	mg/Kg	1	27-Jun-2018 21:15
Beryllium	0.0439	J	0.0197	0.470	mg/Kg	1	27-Jun-2018 21:15
Boron	16.0		0.724	2.35	mg/Kg	1	27-Jun-2018 21:15
Cadmium	0.172	J	0.0254	0.470	mg/Kg	1	27-Jun-2018 21:15
Chromium	6.86		0.0216	0.470	mg/Kg	1	27-Jun-2018 21:15
Cobalt	2.18		0.0141	0.470	mg/Kg	1	27-Jun-2018 21:15
Copper	18.6		0.0357	0.188	mg/Kg	1	27-Jun-2018 21:15
Lead	5.81		0.0122	0.470	mg/Kg	1	27-Jun-2018 21:15
Molybdenum	60.0		0.0169	0.470	mg/Kg	1	27-Jun-2018 21:15
Nickel	32.8		0.0451	0.470	mg/Kg	1	27-Jun-2018 21:15
Selenium	3.92		0.0856	0.470	mg/Kg	1	27-Jun-2018 21:15
Silver	0.0932	J	0.0141	0.470	mg/Kg	1	27-Jun-2018 21:15
Thallium	< 0.210		0.210	0.470	mg/Kg	1	27-Jun-2018 21:15
Tin	3.07		0.0602	1.41	mg/Kg	1	27-Jun-2018 21:15
Titanium	34.5		0.0376	0.470	mg/Kg	1	27-Jun-2018 21:15
Vanadium	11.2		0.0705	0.470	mg/Kg	1	27-Jun-2018 21:15
Zinc	242		3.20	9.40	mg/Kg	20	28-Jun-2018 11:03
<b>TCLP MERCURY BY SW7470A</b>							
				<b>Method:SW7470</b>	Leache:SW1311 / 28-Jun-2018	Prep:SW7470 / 29-Jun-2018	Analyst: JCJ
Mercury	< 0.0000300		0.0000300	0.000200	mg/L	1	30-Jun-2018 11:41
<b>MERCURY BY SW7471B</b>							
				<b>Method:SW7471A</b>		Prep:SW7471A / 03-Jul-2018	Analyst: JBA
Mercury	0.647		0.000476	0.00337	mg/Kg	1	03-Jul-2018 14:08
<b>OIL AND GREASE BY E1664A</b>							
				<b>Method:E1664</b>		Prep:E1664 / 27-Jun-2018	Analyst: KAH
Oil and Grease	2,380		100	100	mg/Kg	1	02-Jul-2018 14:30
<b>BURN RATE BY METHOD SW1030</b>							
				<b>Method:SW1030</b>			Analyst: KAH
Ignitability, Solid	Negative		0	0	Burn Rate, mm/sec	1	02-Jul-2018 14:30
<b>REACTIVE CYANIDE</b>							
				<b>Method:SW7.3.3.2</b>		Prep:SW7.3.3.2	Analyst: MZD
Reactive Cyanide	< 100	n	100	100	mg/Kg	1	29-Jun-2018 16:46
<b>REACTIVE SULFIDE</b>							
				<b>Method:SW7.3.4.2</b>			Analyst: MZD
Reactive Sulfide	< 100	n	100	100	mg/Kg	1	29-Jun-2018 16:36
<b>HEXAVALENT CHROMIUM BY SW7196A</b>							
				<b>Method:SW7196</b>		Prep:SW3060A / 02-Jul-2018	Analyst: JHD
Chromium, Hexavalent	< 0.300		0.300	2.00	mg/kg	1	02-Jul-2018 14:15
<b>CYANIDE</b>							
				<b>Method:SW9014</b>		Prep:SW9010C / 03-Jul-2018	Analyst: KVL
Cyanide	0.283	J	0.283	1.89	mg/Kg	1	03-Jul-2018 13:44

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Client: Golder Associates Inc.  
 Project: Former MCC Recycling Site  
 Sample ID: USOR-AB-02-180626  
 Collection Date: 26-Jun-2018 13:40

**ANALYTICAL REPORT**  
 WorkOrder:HS18061322  
 Lab ID:HS18061322-03  
 Matrix:Sludge

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>PH SOIL BY SW9045D</b>							Method:SW9045B Analyst: KVL
pH	7.86	H	0.100	0.100	pH Units	1	27-Jun-2018 14:45
Temp Deg C @pH	28.2	H	0	0	°C	1	27-Jun-2018 14:45
<b>TOTAL ORGANIC CARBON BY SW9060A</b>							Method:SW9060 Prep:SW9060 / 29-Jun-2018 Analyst: KMU
Total Organic Carbon	39.2		0.0600	0.0600	wt%-dry	1	02-Jul-2018 14:00
<b>PHENOLICS</b>							Method:SW9065 Prep:SW9065 / 02-Jul-2018 Analyst: MZD
Phenolics, Total Recoverable	29.0		0.997	2.49	mg/kg	1	02-Jul-2018 15:49
<b>SUB ANALYSIS AVAILABLE CYANIDE - EPA OIA-1667</b>							Method:NA Analyst: SUBHO
Subcontract Analysis	See Attached		0		NA	1	02-Jul-2018 08:34
<b>SUBCONTRACT ANALYSIS - METALS ANALYSIS</b>							Method:NA Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	05-Jul-2018 14:31

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**WEIGHT LOG**

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**Batch ID:** 2494      **Method:** VOLATILES BY SW8260C

SampID	Container	Sample Wt/Vol	Final Volume	Weight Factor	Container Type
HS18061322-01	1	5.159 (g)	5 (mL)	0.97	Bulk (5030B)
HS18061322-02	1	5.061 (g)	5 (mL)	0.99	Bulk (5030B)
HS18061322-03	1	5.113 (g)	5 (mL)	0.98	Bulk (5030B)

**Batch ID:** 129850      **Method:** METALS BY SW6020A      **Prep:** 3050\_I\_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	0.546	50 (mL)	91.58
HS18061322-02	1	0.5207	50 (mL)	96.02
HS18061322-03	1	0.5317	50 (mL)	94.04

**Batch ID:** 129869      **Method:** OIL AND GREASE BY E1664A      **Prep:** O&G1664\_S PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	15.09	1 (mL)	1
HS18061322-02	1	15.03	1 (mL)	1
HS18061322-03	1	15.11	1 (mL)	1

**Batch ID:** 129887      **Method:** ORGANOCHLORINE PESTICIDES BY SW8081B      **Prep:** PESTPR\_SOX

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	15.03	10 (mL)	0.6653
HS18061322-02	1	15.08	10 (mL)	0.6631
HS18061322-03	1	15.02	10 (mL)	0.6658

**Batch ID:** 129912      **Method:** TEXAS TPH BY TX1005      **Prep:** TX 1005\_S PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	6.37	10 (mL)	1.57
HS18061322-02	1	4.97	10 (mL)	2.012
HS18061322-03	1	7.4	10 (mL)	1.351

**Batch ID:** 129918      **Method:** LOW-LEVEL SEMIVOLATILES BY 8270D      **Prep:** 3541\_B\_LOW

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	15.15	1 (mL)	0.06601
HS18061322-02	1	15.18	1 (mL)	0.06588
HS18061322-03	1	15.11	1 (mL)	0.06618

**Batch ID:** 129921      **Method:** TCLP METALS BY SW6020A      **Prep:** 3010A\_TCLP

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	1	10 (mL)	10
HS18061322-02	1	1	10 (mL)	10
HS18061322-03	1	1	10 (mL)	10

**WEIGHT LOG**

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**Batch ID:** 129924      **Method:** TCLP HERBICIDES BY SW8151A      **Prep:** 3510\_H

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	940	10 (mL)	0.01064
HS18061322-02	1	950	10 (mL)	0.01053
HS18061322-03	1	980	10 (mL)	0.0102

**Batch ID:** 129925      **Method:** CYANIDE      **Prep:** CN\_TS\_PR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	1.0836	50 (mL)	46.14
HS18061322-02	1	1.0364	50 (mL)	48.24

**Batch ID:** 129927      **Method:** CHLORINATED HERBICIDES BY SW8151A      **Prep:** 8151PRS

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	15.11	10 (mL)	0.6618
HS18061322-02	1	15.04	10 (mL)	0.6649
HS18061322-03	1	15.08	10 (mL)	0.6631

**Batch ID:** 129937      **Method:** TCLP PESTICIDES BY SW8081B      **Prep:** 3510\_P

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	960	10 (mL)	0.01042
HS18061322-02	1	960	10 (mL)	0.01042
HS18061322-03	1	980	10 (mL)	0.0102

**Batch ID:** 129940      **Method:** TCLP VOLATILES      **Prep:** 1311ZHE

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	25	500 (mL)	1
HS18061322-02	1	25	500 (mL)	1
HS18061322-03	1	25	500 (mL)	1

**Batch ID:** 129952      **Method:** TCLP SEMIVOLATILES      **Prep:** 3510\_B

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	980	1 (mL)	0.00102
HS18061322-02	1	960	1 (mL)	0.001042
HS18061322-03	1	980	1.5 (mL)	0.001531

**Batch ID:** 129984      **Method:** TCLP MERCURY BY SW7470A      **Prep:** 1311\_HGPR

SampID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS18061322-01	1	10 (mL)	10 (mL)	1
HS18061322-02	1	10 (mL)	10 (mL)	1
HS18061322-03	1	10 (mL)	10 (mL)	1

**WEIGHT LOG****Client:** Golder Associates Inc.**Project:** Former MCC Recycling Site**WorkOrder:** HS18061322
**Batch ID:** 129987      **Method:** HEXAVALENT CHROMIUM BY SW7196A      **Prep:** CR6\_S\_PR3060A

<b>SampID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>
HS18061322-01	1	2.5121	100 (mL)	39.81
HS18061322-02	1	2.5076	100 (mL)	39.88
HS18061322-03	1	2.5008	100 (mL)	39.99

**Batch ID:** 130008      **Method:** PHENOLICS      **Prep:** PHENOLICS\_S PR

<b>SampID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>
HS18061322-01	1	1.0016	50 (mL)	49.92
HS18061322-02	1	1.0023	50 (mL)	49.89
HS18061322-03	1	1.0028	50 (mL)	49.86

**Batch ID:** 130012      **Method:** TOTAL ORGANIC CARBON BY SW9060A      **Prep:** TOC\_SOLID\_PR

<b>SampID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>
HS18061322-01	1	0.5	0.5 (mL)	1
HS18061322-02	1	0.5	0.5 (mL)	1
HS18061322-03	1	0.5	0.5 (mL)	1

**Batch ID:** 130041      **Method:** MERCURY BY SW7471B      **Prep:** HG\_S\_LOWPR

<b>SampID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>
HS18061322-01	1	0.5912	40 (mL)	67.66
HS18061322-02	1	0.5697	40 (mL)	70.21
HS18061322-03	1	0.5925	40 (mL)	67.51

**Batch ID:** 130049      **Method:** CYANIDE      **Prep:** CN\_TS\_PR

<b>SampID</b>	<b>Container</b>	<b>Sample Wt/Vol</b>	<b>Final Volume</b>	<b>Prep Factor</b>
HS18061322-03	1	1.0585	50 (mL)	47.24

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b>	129850	<b>Test Name :</b> METALS BY SW6020A			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		27 Jun 2018 10:17	28 Jun 2018 10:58	20
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		27 Jun 2018 10:17	27 Jun 2018 21:11	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		27 Jun 2018 10:17	28 Jun 2018 11:00	20
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		27 Jun 2018 10:17	27 Jun 2018 21:13	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		27 Jun 2018 10:17	28 Jun 2018 11:03	20
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		27 Jun 2018 10:17	27 Jun 2018 21:15	1
<b>Batch ID</b>	129869	<b>Test Name :</b> OIL AND GREASE BY E1664A			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		27 Jun 2018 13:00	02 Jul 2018 14:30	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		27 Jun 2018 13:00	02 Jul 2018 14:30	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		27 Jun 2018 13:00	02 Jul 2018 14:30	1
<b>Batch ID</b>	129887	<b>Test Name :</b> ORGANOCHLORINE PESTICIDES BY SW8081B			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		28 Jun 2018 14:00	06 Jul 2018 02:32	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		28 Jun 2018 14:00	06 Jul 2018 03:08	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		28 Jun 2018 14:00	06 Jul 2018 03:44	1
<b>Batch ID</b>	129912	<b>Test Name :</b> TEXAS TPH BY TX1005			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		28 Jun 2018 11:40	03 Jul 2018 09:04	50
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		28 Jun 2018 11:40	03 Jul 2018 09:34	20
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		28 Jun 2018 11:40	29 Jun 2018 19:36	10
<b>Batch ID</b>	129918	<b>Test Name :</b> LOW-LEVEL SEMIVOLATILES BY 8270D			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		28 Jun 2018 11:00	03 Jul 2018 16:23	100
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		28 Jun 2018 11:00	03 Jul 2018 16:04	500
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		28 Jun 2018 11:00	03 Jul 2018 17:42	10
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		28 Jun 2018 11:00	03 Jul 2018 16:43	100
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		28 Jun 2018 11:00	03 Jul 2018 17:03	10
<b>Batch ID</b>	129921	<b>Test Name :</b> TCLP METALS BY SW6020A			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30	28 Jun 2018 10:20	28 Jun 2018 12:34	29 Jun 2018 00:21	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30	28 Jun 2018 10:20	28 Jun 2018 12:34	29 Jun 2018 00:23	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40	28 Jun 2018 10:20	28 Jun 2018 12:34	29 Jun 2018 00:25	1
<b>Batch ID</b>	129924	<b>Test Name :</b> TCLP HERBICIDES BY SW8151A			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30	28 Jun 2018 08:00	28 Jun 2018 13:29	30 Jun 2018 15:09	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30	28 Jun 2018 08:00	28 Jun 2018 13:29	30 Jun 2018 15:41	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40	28 Jun 2018 08:00	28 Jun 2018 13:29	30 Jun 2018 09:25	1
<b>Batch ID</b>	129925	<b>Test Name :</b> CYANIDE			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		28 Jun 2018 10:30	28 Jun 2018 13:20	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		28 Jun 2018 10:30	28 Jun 2018 13:20	1

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b>	129927	<b>Test Name :</b> CHLORINATED HERBICIDES BY SW8151A				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		28 Jun 2018 13:00	03 Jul 2018 23:57	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		28 Jun 2018 13:00	04 Jul 2018 00:29	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		28 Jun 2018 13:00	04 Jul 2018 01:00	1
<b>Batch ID</b>	129937	<b>Test Name :</b> TCLP PESTICIDES BY SW8081B				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30	28 Jun 2018 08:00	28 Jun 2018 15:54	03 Jul 2018 05:17	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30	28 Jun 2018 08:00	28 Jun 2018 15:54	03 Jul 2018 03:31	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40	28 Jun 2018 08:00	28 Jun 2018 15:54	03 Jul 2018 01:45	1
<b>Batch ID</b>	129940	<b>Test Name :</b> TCLP VOLATILES				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30	28 Jun 2018 16:00	28 Jun 2018 16:00	03 Jul 2018 00:39	20
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30	28 Jun 2018 16:00	28 Jun 2018 16:00	03 Jul 2018 02:42	20
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40	28 Jun 2018 16:00	28 Jun 2018 16:00	03 Jul 2018 03:07	20
<b>Batch ID</b>	129952	<b>Test Name :</b> TCLP SEMIVOLATILES				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30	28 Jun 2018 08:00	29 Jun 2018 09:38	29 Jun 2018 20:21	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30	28 Jun 2018 08:00	29 Jun 2018 09:38	29 Jun 2018 20:42	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40	28 Jun 2018 08:00	29 Jun 2018 09:38	02 Jul 2018 16:43	1
<b>Batch ID</b>	129984	<b>Test Name :</b> TCLP MERCURY BY SW7470A				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30	28 Jun 2018 10:22	29 Jun 2018 16:52	30 Jun 2018 11:35	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30	28 Jun 2018 10:22	29 Jun 2018 16:52	30 Jun 2018 11:36	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40	28 Jun 2018 10:22	29 Jun 2018 16:52	30 Jun 2018 11:41	1
<b>Batch ID</b>	129987	<b>Test Name :</b> HEXAVALENT CHROMIUM BY SW7196A				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		02 Jul 2018 10:00	02 Jul 2018 14:15	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		02 Jul 2018 10:00	02 Jul 2018 14:15	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		02 Jul 2018 10:00	02 Jul 2018 14:15	1
<b>Batch ID</b>	130008	<b>Test Name :</b> PHENOLICS				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		02 Jul 2018 10:00	02 Jul 2018 15:49	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		02 Jul 2018 10:00	02 Jul 2018 15:49	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		02 Jul 2018 10:00	02 Jul 2018 15:49	1
<b>Batch ID</b>	130012	<b>Test Name :</b> TOTAL ORGANIC CARBON BY SW9060A				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		29 Jun 2018 16:25	02 Jul 2018 14:00	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		29 Jun 2018 16:25	02 Jul 2018 14:00	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		29 Jun 2018 16:25	02 Jul 2018 14:00	1
<b>Batch ID</b>	130041	<b>Test Name :</b> MERCURY BY SW7471B				<b>Matrix:</b> Sludge
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30		03 Jul 2018 08:23	03 Jul 2018 14:13	5
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30		03 Jul 2018 08:23	03 Jul 2018 14:15	5
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		03 Jul 2018 08:23	03 Jul 2018 14:08	1
<b>Batch ID</b>	130049	<b>Test Name :</b> CYANIDE				<b>Matrix:</b> Sludge
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40		03 Jul 2018 10:03	03 Jul 2018 13:44	1

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	TCLP Date	Prep Date	Analysis Date	DF
<b>Batch ID</b>	R318772	<b>Test Name :</b> PH SOIL BY SW9045D			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			27 Jun 2018 14:45	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			27 Jun 2018 14:45	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			27 Jun 2018 14:45	1
<b>Batch ID</b>	R318973	<b>Test Name :</b> REACTIVE SULFIDE			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			29 Jun 2018 16:36	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			29 Jun 2018 16:36	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			29 Jun 2018 16:36	1
<b>Batch ID</b>	R318975	<b>Test Name :</b> REACTIVE CYANIDE			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			29 Jun 2018 16:46	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			29 Jun 2018 16:46	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			29 Jun 2018 16:46	1
<b>Batch ID</b>	R319007	<b>Test Name :</b> SUB ANALYSIS AVAILABLE CYANIDE - EPA OIA-1667			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			02 Jul 2018 08:34	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			02 Jul 2018 08:34	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			02 Jul 2018 08:34	1
<b>Batch ID</b>	R319059	<b>Test Name :</b> BURN RATE BY METHOD SW1030			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			02 Jul 2018 14:30	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			02 Jul 2018 14:30	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			02 Jul 2018 14:30	1
<b>Batch ID</b>	R319074	<b>Test Name :</b> VOLATILES BY SW8260C			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			03 Jul 2018 01:38	500
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			03 Jul 2018 02:02	500
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			03 Jul 2018 02:27	500
<b>Batch ID</b>	R319132	<b>Test Name :</b> TRIVALENT CHROMIUM			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			03 Jul 2018 17:48	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			03 Jul 2018 17:48	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			03 Jul 2018 17:48	1
<b>Batch ID</b>	R319192	<b>Test Name :</b> SUBCONTRACT ANALYSIS - METALS ANALYSIS			<b>Matrix:</b> Sludge	
HS18061322-01	USOR-CT-01-180626	26 Jun 2018 11:30			05 Jul 2018 14:31	1
HS18061322-02	USOR-AB-01-180626	26 Jun 2018 13:30			05 Jul 2018 14:31	1
HS18061322-03	USOR-AB-02-180626	26 Jun 2018 13:40			05 Jul 2018 14:31	1

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129887

Instrument: ECD\_11

Method: SW8081

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control	RPD Ref Value	RPD %RPD	Limit Qual
						Limit			
4,4'-DDD	< 0.50	3.3							
4,4'-DDE	< 0.50	3.3							
4,4'-DDT	< 0.50	3.3							
Aldrin	< 0.30	1.7							
alpha-BHC	< 0.30	1.7							
beta-BHC	< 0.30	1.7							
Chlordane	< 2.0	17							
delta-BHC	< 0.20	1.7							
Dieldrin	< 0.50	3.3							
Endosulfan I	< 0.30	1.7							
Endosulfan II	< 0.60	3.3							
Endosulfan sulfate	< 0.60	3.3							
Endrin	< 0.60	3.3							
Endrin aldehyde	< 0.60	3.3							
gamma-BHC	< 0.20	1.7							
Heptachlor	< 0.30	1.7							
Heptachlor epoxide	< 0.30	1.7							
Methoxychlor	< 3.4	17							
Toxaphene	< 4.8	17							
Surr: Decachlorobiphenyl	8.823	0	6.667	0	132	59 - 144			
Surr: Tetrachloro-m-xylene	7.568	0	6.667	0	114	56.9 - 130			

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129887		Instrument: ECD_11		Method: SW8081			
LCS	Sample ID: LCS-129887	Units: ug/Kg		Analysis Date: 02-Jul-2018 23:59			
Client ID:		Run ID: ECD_11_319154		SeqNo: 4638167	PrepDate: 28-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
4,4'-DDD	24.77	3.3	33.33	0	74.3	53 - 138	
4,4'-DDE	21.79	3.3	33.33	0	65.4	57 - 136	
4,4'-DDT	25.18	3.3	33.33	0	75.5	53 - 139	
Aldrin	11.76	1.7	16.67	0	70.6	52 - 130	
alpha-BHC	11.86	1.7	16.67	0	71.2	52 - 130	
beta-BHC	11.08	1.7	16.67	0	66.5	62 - 130	
delta-BHC	10.33	1.7	16.67	0	62.0	41 - 137	
Dieldrin	24.72	3.3	33.33	0	74.2	54 - 138	
Endosulfan I	10.9	1.7	16.67	0	65.4	55 - 132	
Endosulfan II	19.73	3.3	33.33	0	59.2	59 - 134	
Endosulfan sulfate	24.8	3.3	33.33	0	74.4	54 - 141	
Endrin	25.38	3.3	33.33	0	76.1	60 - 157	
Endrin aldehyde	25.16	3.3	33.33	0	75.5	56 - 146	
gamma-BHC	11.94	1.7	16.67	0	71.6	52 - 133	
Heptachlor	12.25	1.7	16.67	0	73.5	54 - 134	
Heptachlor epoxide	11.95	1.7	16.67	0	71.7	58 - 130	
Methoxychlor	131.6	17	166.6	0	79.0	60 - 140	
<i>Surr: Decachlorobiphenyl</i>	10.15	0	13.33	0	76.1	59 - 144	
<i>Surr: Tetrachloro-m-xylene</i>	9.053	0	13.33	0	67.9	56.9 - 130	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129887		Instrument: ECD_11		Method: SW8081			
MS	Sample ID: HS18061286-01MS	Units: ug/Kg		Analysis Date: 05-Jul-2018 23:34			
Client ID:	Run ID: ECD_11_319154			SeqNo: 4638158	PrepDate: 28-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
4,4'-DDD	38.16	6.6	33.2	0	115	53 - 138	
4,4'-DDE	36.26	6.6	33.2	0	109	57 - 136	
4,4'-DDT	40.53	6.6	33.2	2.09	116	53 - 139	
Aldrin	17.94	3.3	16.6	0	108	52 - 130	
alpha-BHC	17.95	3.3	16.6	0	108	52 - 130	P
beta-BHC	20.48	3.3	16.6	0	123	62 - 130	
delta-BHC	18.73	3.3	16.6	0	113	41 - 137	
Dieldrin	40.6	6.6	33.2	0	122	54 - 138	
Endosulfan I	13.19	3.3	16.6	0	79.4	55 - 132	
Endosulfan II	28.94	6.6	33.2	0	87.2	59 - 134	
Endosulfan sulfate	40.96	6.6	33.2	0	123	54 - 141	
Endrin	41.33	6.6	33.2	0	124	60 - 157	
Endrin aldehyde	31.82	6.6	33.2	0	95.8	56 - 146	
gamma-BHC	19.19	3.3	16.6	0	116	52 - 133	
Heptachlor	18.25	3.3	16.6	0	110	54 - 134	
Heptachlor epoxide	18.22	3.3	16.6	0	110	58 - 130	
Methoxychlor	194.3	33	165.9	0	117	60 - 140	
Surr: Decachlorobiphenyl	16.44	0	13.28	0	124	59 - 144	
Surr: Tetrachloro-m-xylene	11.71	0	13.28	0	88.2	56.9 - 130	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129887		Instrument: ECD_11		Method: SW8081						
MSD	Sample ID: HS18061286-01MSD	Units: ug/Kg		Analysis Date: 06-Jul-2018 00:10						
Client ID:	Run ID: ECD_11_319154			SeqNo: 4638159	PrepDate: 28-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
4,4'-DDD	39.21	6.6	33.22	0	118	53 - 138	38.16	2.71	30	
4,4'-DDE	37.08	6.6	33.22	0	112	57 - 136	36.26	2.22	30	
4,4'-DDT	35.78	6.6	33.22	2.09	101	53 - 139	40.53	12.4	30	
Aldrin	17.16	3.3	16.61	0	103	52 - 130	17.94	4.46	30	
alpha-BHC	17.54	3.3	16.61	0	106	52 - 130	17.95	2.3	30	
beta-BHC	20.37	3.3	16.61	0	123	62 - 130	20.48	0.545	30	
delta-BHC	16.57	3.3	16.61	0	99.8	41 - 137	18.73	12.2	30	
Dieldrin	37.09	6.6	33.22	0	112	54 - 138	40.6	9.03	30	
Endosulfan I	11.99	3.3	16.61	0	72.2	55 - 132	13.19	9.53	30	
Endosulfan II	29.01	6.6	33.22	0	87.3	59 - 134	28.94	0.266	30	
Endosulfan sulfate	40.02	6.6	33.22	0	120	54 - 141	40.96	2.3	30	
Endrin	41.88	6.6	33.22	0	126	60 - 157	41.33	1.32	30	
Endrin aldehyde	31.4	6.6	33.22	0	94.5	56 - 146	31.82	1.31	30	
gamma-BHC	18.51	3.3	16.61	0	111	52 - 133	19.19	3.61	30	
Heptachlor	18.82	3.3	16.61	0	113	54 - 134	18.25	3.07	30	
Heptachlor epoxide	17.75	3.3	16.61	0	107	58 - 130	18.22	2.57	30	
Methoxychlor	173.1	33	166	0	104	60 - 140	194.3	11.6	30	
<i>Surr: Decachlorobiphenyl</i>	15.26	0	13.29	0	115	59 - 144	16.44	7.43	30	
<i>Surr: Tetrachloro-m-xylene</i>	9.141	0	13.29	0	68.8	56.9 - 130	11.71	24.7	30	

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129924		Instrument: ECD_9		Method: SW1311/8150					
MLBK	Sample ID: MBLK-129924			Units: ug/L		Analysis Date: 30-Jun-2018 10:58			
Client ID:		Run ID: ECD_9_319179		SeqNo: 4636664	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-TP (Silvex)	< 0.050	0.20							
2,4-D	< 0.060	0.20							
Surr: DCAA	3.95	0.20	5	0	79.0	40 - 140			
LCS	Sample ID: LCS-129924			Units: ug/L		Analysis Date: 30-Jun-2018 11:30			
Client ID:		Run ID: ECD_9_319179		SeqNo: 4636665	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-TP (Silvex)	2.21	0.20	2.5	0	88.4	40 - 140			
2,4-D	2.644	0.20	2.5	0	106	20 - 125			
Surr: DCAA	3.902	0.20	5	0	78.0	40 - 140			
LCSD	Sample ID: LCSD-129924			Units: ug/L		Analysis Date: 30-Jun-2018 12:01			
Client ID:		Run ID: ECD_9_319179		SeqNo: 4636666	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-TP (Silvex)	2.325	0.20	2.5	0	93.0	40 - 140	2.21	5.06	30
2,4-D	2.762	0.20	2.5	0	110	20 - 125	2.644	4.37	30
Surr: DCAA	4.051	0.20	5	0	81.0	40 - 140	3.902	3.76	30
MS	Sample ID: HS18061286-01MS			Units: ug/L		Analysis Date: 30-Jun-2018 13:04			
Client ID:		Run ID: ECD_9_319179		SeqNo: 4636668	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-TP (Silvex)	2.259	0.21	2.604	0	86.8	40 - 140			
2,4-D	3.784	0.21	2.604	0.6462	120	20 - 125			
Surr: DCAA	4.101	0.21	5.208	0	78.7	40 - 140			

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129927		Instrument: ECD_9		Method: SW8151			
MLBK	Sample ID: MBLK-129927	Units: ug/Kg		Analysis Date: 30-Jun-2018 17:15			
Client ID:	Run ID: ECD_9_319181	SeqNo: 4636729	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
2,4,5-TP (Silvex)	< 1.7	3.3					
2,4-D	< 0.70	6.6					
Surr: DCAA	56.66	0	166.7	0	34.0	30 - 150	
LCS	Sample ID: LCS-129927	Units: ug/Kg		Analysis Date: 30-Jun-2018 17:47			
Client ID:	Run ID: ECD_9_319181	SeqNo: 4636730	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
2,4,5-TP (Silvex)	60.72	3.3	83.33	0	72.9	50 - 150	
2,4-D	41.83	6.6	83.33	0	50.2	40 - 150	
Surr: DCAA	90.75	0	166.7	0	54.4	30 - 150	
MS	Sample ID: HS18061286-01MS	Units: ug/Kg		Analysis Date: 30-Jun-2018 21:27			
Client ID:	Run ID: ECD_9_319181	SeqNo: 4636731	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
2,4,5-TP (Silvex)	268.5	6.6	166.1	0	162	50 - 150	S
2,4-D	235.5	13	166.1	0	142	40 - 150	
Surr: DCAA	532.1	0	332.2	0	160	30 - 150	S
MSD	Sample ID: HS18061286-01MSD	Units: ug/Kg		Analysis Date: 30-Jun-2018 21:58			
Client ID:	Run ID: ECD_9_319181	SeqNo: 4636732	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
2,4,5-TP (Silvex)	271.4	6.6	165.9	0	164	50 - 150	268.5 1.07 30 S
2,4-D	243.2	13	165.9	0	147	40 - 150	235.5 3.24 30
Surr: DCAA	620.6	0	331.8	0	187	30 - 150	532.1 15.4 30 S

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129937		Instrument: ECD_11		Method: SW1311/8081A			
MLBK	Sample ID: MBLK-129937	Units: ug/L		Analysis Date: 02-Jul-2018 20:09			
Client ID:	Run ID: ECD_11_319159	SeqNo: 4636310	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Chlordane	< 0.20	0.50					
Endrin	< 0.030	0.10					
gamma-BHC	< 0.010	0.050					
Heptachlor	< 0.010	0.050					
Heptachlor epoxide	< 0.010	0.050					
Methoxychlor	< 0.15	0.50					
Toxaphene	< 0.20	0.50					
<i>Surr: Decachlorobiphenyl</i>	0.277	0.10	0.2	0	138	30 - 150	
<i>Surr: Tetrachloro-m-xylene</i>	0.2554	0.050	0.2	0	128	30 - 150	
LCS	Sample ID: LCS-129937	Units: ug/L		Analysis Date: 02-Jul-2018 20:27			
Client ID:	Run ID: ECD_11_319159	SeqNo: 4636311	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Endrin	0.8788	0.10	1	0	87.9	54 - 148	
gamma-BHC	0.3903	0.050	0.5	0	78.1	58 - 130	
Heptachlor	0.3893	0.050	0.5	0	77.9	40 - 140	
Heptachlor epoxide	0.3682	0.050	0.5	0	73.6	40 - 140	
Methoxychlor	4.435	0.50	5	0	88.7	50 - 150	
<i>Surr: Decachlorobiphenyl</i>	0.3512	0.10	0.4	0	87.8	30 - 150	
<i>Surr: Tetrachloro-m-xylene</i>	0.2931	0.050	0.4	0	73.3	30 - 150	
LCSD	Sample ID: LCSD-129937	Units: ug/L		Analysis Date: 02-Jul-2018 20:45			
Client ID:	Run ID: ECD_11_319159	SeqNo: 4636312	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Endrin	0.5753	0.10	0.5	0	115	54 - 148	0.8788 41.7 20 R
gamma-BHC	0.2698	0.050	0.25	0	108	58 - 130	0.3903 36.5 20 R
Heptachlor	0.2875	0.050	0.25	0	115	40 - 140	0.3893 30.1 20 R
Heptachlor epoxide	0.2614	0.050	0.25	0	105	40 - 140	0.3682 33.9 20 R
Methoxychlor	2.962	0.50	2.5	0	118	50 - 150	4.435 39.8 20 R
<i>Surr: Decachlorobiphenyl</i>	0.2221	0.10	0.2	0	111	30 - 150	0.3512 45 20 R
<i>Surr: Tetrachloro-m-xylene</i>	0.199	0.050	0.2	0	99.5	30 - 150	0.2931 38.3 20 R

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129937		Instrument: ECD_11		Method: SW1311/8081A					
MS	Sample ID: HS18061286-01MS	Units: ug/L		Analysis Date: 03-Jul-2018 04:07					
Client ID:	Run ID: ECD_11_319159			SeqNo: 4636316	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Endrin	0.1212	0.10	0.5155	0	23.5	54 - 148			SP
gamma-BHC	0.07342	0.052	0.2577	0	28.5	58 - 130			SP
Heptachlor	0.04648	0.052	0.2577	0.02846	6.99	40 - 140			JSP
Heptachlor epoxide	< 0.010	0.052	0.2577	0	0	40 - 140			S
Methoxychlor	1.022	0.52	2.577	0	39.7	50 - 150			S
<i>Surr: Decachlorobiphenyl</i>	0.1306	0.10	0.2062	0	63.4	30 - 150			
<i>Surr: Tetrachloro-m-xylene</i>	0.3806	0.052	0.2062	0	185	30 - 150			S

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129912		Instrument: FID-12		Method: TX1005			
MLBK	Sample ID: MBLK-129912	Units: mg/Kg		Analysis Date: 29-Jun-2018 15:41			
Client ID:	Run ID: FID-12_319011	SeqNo: 4632620		PrepDate: 28-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
nC6 to nC12	< 7.4	50					
>nC12 to nC28	< 9.8	50					
>nC28 to nC35	< 9.8	50					
Total Petroleum Hydrocarbon	< 7.4	50					
Surr: 2-Fluorobiphenyl	20.5	0	25	0	82.0	70 - 130	
Surr: Trifluoromethyl benzene	23.9	0	25	0	95.6	70 - 130	
LCS	Sample ID: LCS-129912	Units: mg/Kg		Analysis Date: 29-Jun-2018 16:10			
Client ID:	Run ID: FID-12_319011	SeqNo: 4632621		PrepDate: 28-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
nC6 to nC12	215.9	50	250	0	86.3	75 - 125	
>nC12 to nC28	248.2	50	250	0	99.3	75 - 125	
Surr: 2-Fluorobiphenyl	20.18	0	25	0	80.7	70 - 130	
Surr: Trifluoromethyl benzene	23.66	0	25	0	94.6	70 - 130	
LCSD	Sample ID: LCSD-129912	Units: mg/Kg		Analysis Date: 29-Jun-2018 16:40			
Client ID:	Run ID: FID-12_319011	SeqNo: 4632622		PrepDate: 28-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
nC6 to nC12	215.5	50	250	0	86.2	75 - 125	215.9 0.159 20
>nC12 to nC28	255.6	50	250	0	102	75 - 125	248.2 2.95 20
Surr: 2-Fluorobiphenyl	22.04	0	25	0	88.2	70 - 130	20.18 8.8 20
Surr: Trifluoromethyl benzene	24.92	0	25	0	99.7	70 - 130	23.66 5.2 20
MS	Sample ID: HS18061398-01MS	Units: mg/Kg		Analysis Date: 29-Jun-2018 17:39			
Client ID:	Run ID: FID-12_319011	SeqNo: 4632624		PrepDate: 28-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
nC6 to nC12	206.7	50	249.5	0	82.9	75 - 125	
>nC12 to nC28	276.7	50	249.5	0	111	75 - 125	
Surr: 2-Fluorobiphenyl	20.76	0	24.95	0	83.2	70 - 130	
Surr: Trifluoromethyl benzene	22.9	0	24.95	0	91.8	70 - 130	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129912

Instrument: FID-12

Method: TX1005

MSD	Sample ID:	HS18061398-01MSD		Units:	mg/Kg		Analysis Date: 29-Jun-2018 18:08			
Client ID:		Run ID: FID-12_319011		SeqNo:	4632625	PrepDate:	28-Jun-2018	DF:	1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
nC6 to nC12		213.4	49	243.7	0	87.6	75 - 125	206.7	3.17 20	
>nC12 to nC28		273.2	49	243.7	0	112	75 - 125	276.7	1.28 20	
Surr: 2-Fluorobiphenyl		22.86	0	24.37	0	93.8	70 - 130	20.76	9.64 20	
Surr: Trifluoromethyl benzene		24.97	0	24.37	0	102	70 - 130	22.9	8.65 20	

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129850		Instrument: ICPMS04		Method: SW6020				
MBLK	Sample ID: MBLK-129850	Units: mg/Kg		Analysis Date: 27-Jun-2018 20:24				
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4628192	PrepDate: 27-Jun-2018	DF: 1	SPK Ref Value	Control Limit	RPD Ref Value %RPD	RPD Limit Qual
Analyte	Result	PQL	SPK Val	%REC				
Antimony	< 0.0650	0.500						
Arsenic	< 0.0700	0.500						
Barium	< 0.0300	0.500						
Beryllium	< 0.0210	0.500						
Boron	< 0.770	2.50						
Cadmium	< 0.0270	0.500						
Chromium	< 0.0230	0.500						
Cobalt	< 0.0150	0.500						
Copper	< 0.0380	0.200						
Lead	< 0.0130	0.500						
Molybdenum	< 0.0180	0.500						
Nickel	< 0.0480	0.500						
Selenium	< 0.0910	0.500						
Silver	< 0.0150	0.500						
Thallium	< 0.223	0.500						
Tin	1.058	1.50						J
Titanium	0.0424	0.500						J
Vanadium	< 0.0750	0.500						
Zinc	< 0.170	0.500						

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129850		Instrument: ICPMS04		Method: SW6020			
LCS	Sample ID: LCS-129850	Units: mg/Kg		Analysis Date: 27-Jun-2018 20:26			
Client ID:		Run ID: ICPMS04_318803	SeqNo: 4628193	PrepDate: 27-Jun-2018	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
Antimony	9.596	0.500	10	0	96.0	80 - 120	
Arsenic	8.978	0.500	10	0	89.8	80 - 120	
Barium	9.745	0.500	10	0	97.5	80 - 120	
Beryllium	10.21	0.500	10	0	102	80 - 120	
Boron	53.98	2.50	50	0	108	80 - 120	
Cadmium	9.515	0.500	10	0	95.2	80 - 120	
Chromium	9.738	0.500	10	0	97.4	80 - 120	
Cobalt	9.848	0.500	10	0	98.5	80 - 120	
Copper	9.725	0.200	10	0	97.3	80 - 120	
Lead	9.108	0.500	10	0	91.1	80 - 120	
Molybdenum	10.01	0.500	10	0	100	80 - 120	
Nickel	9.843	0.500	10	0	98.4	80 - 120	
Selenium	9.017	0.500	10	0	90.2	80 - 120	
Silver	9.603	0.500	10	0	96.0	80 - 120	
Thallium	9.715	0.500	10	0	97.1	80 - 120	
Tin	11.04	1.50	10	0	110	80 - 120	
Titanium	19.72	0.500	20	0	98.6	80 - 120	
Vanadium	9.498	0.500	10	0	95.0	80 - 120	
Zinc	9.675	0.500	10	0	96.8	80 - 120	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129850		Instrument: ICPMS04		Method: SW6020			
MS	Sample ID: HS18061231-02MS	Units: mg/Kg		Analysis Date: 27-Jun-2018 20:33			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4628196		PrepDate: 27-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
Antimony	4.213	0.461	9.22	0.06835	45.0	75 - 125	S
Arsenic	16.57	0.461	9.22	7.384	99.7	75 - 125	
Barium	58.89	0.461	9.22	33.62	274	75 - 125	S
Beryllium	9.05	0.461	9.22	0.394	93.9	75 - 125	
Boron	58.69	2.30	46.1	7.575	111	75 - 125	
Cadmium	8.349	0.461	9.22	0.05117	90.0	75 - 125	
Chromium	22.45	0.461	9.22	7.98	157	75 - 125	S
Cobalt	12.88	0.461	9.22	4.026	96.0	75 - 125	
Copper	11.41	0.184	9.22	3.657	84.1	75 - 125	
Lead	11.97	0.461	9.22	3.219	94.9	75 - 125	
Molybdenum	8.997	0.461	9.22	0.1345	96.1	75 - 125	
Nickel	19.55	0.461	9.22	10.01	103	75 - 125	
Selenium	9.763	0.461	9.22	0.2565	103	75 - 125	
Silver	8.169	0.461	9.22	0.009398	88.5	75 - 125	
Thallium	9.202	0.461	9.22	0.08848	98.8	75 - 125	
Tin	9.777	1.38	9.22	1.035	94.8	75 - 125	
Titanium	79.19	0.461	18.44	28.44	275	75 - 125	S
Vanadium	29.91	0.461	9.22	11.22	203	75 - 125	
Zinc	23.83	0.461	9.22	13.43	113	75 - 125	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129850		Instrument: ICPMS04		Method: SW6020					
MSD	Sample ID: HS18061231-02MSD	Units: mg/Kg		Analysis Date: 27-Jun-2018 20:35					
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4628197		PrepDate: 27-Jun-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Antimony	4.169	0.463	9.27	0.06835	44.2	75 - 125	4.213	1.05	20 S
Arsenic	17.26	0.463	9.27	7.384	107	75 - 125	16.57	4.06	20
Barium	61.05	0.463	9.27	33.62	296	75 - 125	58.89	3.6	20 S
Beryllium	9.147	0.463	9.27	0.394	94.4	75 - 125	9.05	1.06	20
Boron	57.63	2.32	46.35	7.575	108	75 - 125	58.69	1.82	20
Cadmium	8.132	0.463	9.27	0.05117	87.2	75 - 125	8.349	2.64	20
Chromium	22.24	0.463	9.27	7.98	154	75 - 125	22.45	0.932	20 S
Cobalt	12.42	0.463	9.27	4.026	90.6	75 - 125	12.88	3.63	20
Copper	10.8	0.185	9.27	3.657	77.1	75 - 125	11.41	5.52	20
Lead	11.78	0.463	9.27	3.219	92.4	75 - 125	11.97	1.54	20
Molybdenum	9.155	0.463	9.27	0.1345	97.3	75 - 125	8.997	1.75	20
Nickel	19.23	0.463	9.27	10.01	99.5	75 - 125	19.55	1.62	20
Selenium	9.609	0.463	9.27	0.2565	101	75 - 125	9.763	1.58	20
Silver	8.099	0.463	9.27	0.009398	87.3	75 - 125	8.169	0.862	20
Thallium	9.149	0.463	9.27	0.08848	97.7	75 - 125	9.202	0.577	20
Tin	9.693	1.39	9.27	1.035	93.4	75 - 125	9.777	0.864	20
Titanium	72.83	0.463	18.54	28.44	239	75 - 125	79.19	8.37	20 S
Vanadium	29.2	0.463	9.27	11.22	194	75 - 125	29.91	2.42	20
Zinc	23.44	0.463	9.27	13.43	108	75 - 125	23.83	1.68	20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129850		Instrument: ICPMS04		Method: SW6020			
PDS	Sample ID: HS18061231-02PDS	Units: mg/Kg		Analysis Date: 27-Jun-2018 20:37			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4628198	PrepDate: 27-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Antimony	8.689	0.475	9.493	0.06835	90.8	75 - 125	
Arsenic	16.21	0.475	9.493	7.384	93.0	75 - 125	
Barium	43.76	0.475	9.493	33.62	107	75 - 125	
Beryllium	9.706	0.475	9.493	0.394	98.1	75 - 125	
Boron	103.2	2.37	94.93	7.575	101	75 - 125	
Cadmium	8.093	0.475	9.493	0.05117	84.7	75 - 125	
Chromium	16.37	0.475	9.493	7.98	88.4	75 - 125	
Cobalt	11.94	0.475	9.493	4.026	83.4	75 - 125	
Lead	11.45	0.475	9.493	3.219	86.7	75 - 125	
Molybdenum	9.215	0.475	9.493	0.1345	95.7	75 - 125	
Nickel	17.44	0.475	9.493	10.01	78.3	75 - 125	
Selenium	9.805	0.475	9.493	0.2565	101	75 - 125	
Silver	8.058	0.475	9.493	0.009398	84.8	75 - 125	
Thallium	9.234	0.475	9.493	0.08848	96.3	75 - 125	
Tin	10.03	1.42	9.493	1.035	94.8	75 - 125	
Vanadium	19.92	0.475	9.493	11.22	91.7	75 - 125	
Zinc	20.94	0.475	9.493	13.43	79.1	75 - 125	
PDS	Sample ID: HS18061231-02PDS	Units: mg/Kg		Analysis Date: 28-Jun-2018 10:47			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4628833	PrepDate: 27-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Copper	10.93	0.190	9.493	3.059	83.0	75 - 125	
Titanium	56.49	0.475	18.99	13.17	228	75 - 125	S

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129850		Instrument: ICPMS04		Method: SW6020			
SD	Sample ID: HS18061231-02SD	Units: mg/Kg		Analysis Date: 27-Jun-2018 20:31			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4628195	PrepDate: 27-Jun-2018	DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %D
Antimony	< 0.309	2.37				0.06835	0 10
Arsenic	7.287	2.37				7.384	1.31 10
Barium	36.18	2.37				33.62	7.63 10
Beryllium	0.4147	2.37				0.394	0 10 J
Boron	8.282	11.9				7.575	0 10 J
Cadmium	< 0.128	2.37				0.05117	0 10
Chromium	8.066	2.37				7.98	1.08 10
Cobalt	4.163	2.37				4.026	3.4 10
Lead	3.191	2.37				3.219	0.873 10
Molybdenum	0.1485	2.37				0.1345	0 10 J
Nickel	9.566	2.37				10.01	4.45 10
Selenium	< 0.432	2.37				0.2565	0 10
Silver	< 0.0712	2.37				0.009398	0 10
Thallium	< 1.06	2.37				0.08848	0 10
Tin	1.089	7.12				1.035	0 10 J
Vanadium	11.74	2.37				11.22	4.72 10
Zinc	14.25	2.37				13.43	6.1 10
SD	Sample ID: HS18061231-02SD	Units: mg/Kg		Analysis Date: 28-Jun-2018 10:45			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4628832	PrepDate: 27-Jun-2018	DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %D
Copper	3.341	0.949				3.059	9.23 10
Titanium	12.49	2.37				13.17	5.2 10

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129921		Instrument: ICPMS04		Method: SW1311/6020			
MLBK	Sample ID: MBLKT1-129921	Units: mg/L		Analysis Date: 28-Jun-2018 23:49			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4630945	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Arsenic	< 0.00400	0.0500					
Barium	< 0.0190	0.200					
Cadmium	< 0.00200	0.0500					
Chromium	< 0.00400	0.0500					
Lead	< 0.00600	0.0500					
Selenium	< 0.0110	0.0500					
Silver	< 0.00200	0.0500					
MLBK	Sample ID: MBLK-129921	Units: mg/L		Analysis Date: 28-Jun-2018 23:51			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4630946	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Arsenic	< 0.000400	0.00500					
Barium	< 0.00190	0.0200					
Cadmium	< 0.000200	0.00500					
Chromium	< 0.000400	0.00500					
Lead	< 0.000600	0.00500					
Selenium	< 0.00110	0.00500					
Silver	< 0.000200	0.00500					
LCS	Sample ID: LCS-129921	Units: mg/L		Analysis Date: 28-Jun-2018 23:53			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4630947	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Arsenic	0.04848	0.00500	0.05	0	97.0	80 - 120	
Barium	0.04619	0.0200	0.05	0	92.4	80 - 120	
Cadmium	0.04728	0.00500	0.05	0	94.6	80 - 120	
Chromium	0.04567	0.00500	0.05	0	91.3	80 - 120	
Lead	0.04518	0.00500	0.05	0	90.4	80 - 120	
Selenium	0.05272	0.00500	0.05	0	105	80 - 120	
Silver	0.0472	0.00500	0.05	0	94.4	80 - 120	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129921		Instrument: ICPMS04		Method: SW1311/6020					
MS	Sample ID: HS18061286-01MS	Units: mg/L		Analysis Date: 29-Jun-2018 00:00					
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4630950		PrepDate: 28-Jun-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.4923	0.0500	0.5	0.00809	96.8	80 - 120			
Barium	0.6182	0.200	0.5	0.13	97.6	80 - 120			
Cadmium	0.4704	0.0500	0.5	0.00015	94.1	80 - 120			
Chromium	0.4722	0.0500	0.5	0.00028	94.4	80 - 120			
Lead	0.4584	0.0500	0.5	0.00115	91.4	80 - 120			
Selenium	0.5611	0.0500	0.5	0.00271	112	80 - 120			
Silver	0.4642	0.0500	0.5	0.00017	92.8	80 - 120			
MSD	Sample ID: HS18061286-01MSD	Units: mg/L		Analysis Date: 29-Jun-2018 00:02					
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4630951		PrepDate: 28-Jun-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Arsenic	0.4848	0.0500	0.5	0.00809	95.4	80 - 120	0.4923	1.53	20
Barium	0.6039	0.200	0.5	0.13	94.8	80 - 120	0.6182	2.34	20
Cadmium	0.476	0.0500	0.5	0.00015	95.2	80 - 120	0.4704	1.17	20
Chromium	0.4623	0.0500	0.5	0.00028	92.4	80 - 120	0.4722	2.1	20
Lead	0.4503	0.0500	0.5	0.00115	89.8	80 - 120	0.4584	1.78	20
Silver	0.4572	0.0500	0.5	0.00017	91.4	80 - 120	0.4642	1.53	20
MSD	Sample ID: HS18061286-01MSD	Units: mg/L		Analysis Date: 29-Jun-2018 13:29					
Client ID:	Run ID: ICPMS05_318921	SeqNo: 4631313		PrepDate: 28-Jun-2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Selenium	0.4991	0.0500	0.5	0	99.8	80 - 120	0.5611	11.7	20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129921		Instrument: ICPMS04		Method: SW1311/6020			
PDS	Sample ID: HS18061286-01PDS	Units: mg/L		Analysis Date: 29-Jun-2018 00:05			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4630952	PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
Arsenic	0.954	0.0500	1	0.00809	94.6	75 - 125	
Barium	1.036	0.200	1	0.13	90.6	75 - 125	
Cadmium	0.9076	0.0500	1	0.00015	90.7	75 - 125	
Chromium	0.92	0.0500	1	0.00028	92.0	75 - 125	
Lead	0.8824	0.0500	1	0.00115	88.1	75 - 125	
Selenium	0.9935	0.0500	1	0.00271	99.1	75 - 125	
Silver	0.8886	0.0500	1	0.00017	88.8	75 - 125	
SD	Sample ID: HS18061286-01SD	Units: mg/L		Analysis Date: 28-Jun-2018 23:58			
Client ID:	Run ID: ICPMS04_318803	SeqNo: 4630949	PrepDate: 28-Jun-2018	DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %D
Arsenic	< 0.0200	0.250				0.00809	0 10
Barium	0.1409	1.00				0.13	0 10 J
Cadmium	< 0.0100	0.250				0.00015	0 10
Chromium	< 0.0200	0.250				0.00028	0 10
Lead	< 0.0300	0.250				0.00115	0 10
Selenium	< 0.0550	0.250				0.00271	0 10
Silver	< 0.0100	0.250				0.00017	0 10

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

<b>Batch ID:</b> 129984	<b>Instrument:</b> HG03	<b>Method:</b> SW7470
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Analyte	Sample ID:	Run ID:		Units:		Analysis Date:	
		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit
Mercury	GBLKT3-129984	HG03_319005		mg/L		30-Jun-2018 10:36	
		Client ID:		SeqNo: 4632281	PrepDate: 29-Jun-2018	DF: 1	

Mercury	< 0.0000300	0.000200
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Analyte	Sample ID:	Run ID:		Units:		Analysis Date:	
		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit
Mercury	MBLK-129984	HG03_319005		mg/L		30-Jun-2018 10:38	
		Client ID:		SeqNo: 4632282	PrepDate: 29-Jun-2018	DF: 1	

Mercury	< 0.0000300	0.000200
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Analyte	Sample ID:	Run ID:		Units:		Analysis Date:	
		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit
Mercury	GBLKT2-129984	HG03_319005		mg/L		30-Jun-2018 10:35	
		Client ID:		SeqNo: 4632280	PrepDate: 29-Jun-2018	DF: 1	

Mercury	< 0.0000300	0.000200
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Analyte	Sample ID:	Run ID:		Units:		Analysis Date:	
		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit
Mercury	GBLKT1-129984	HG03_319005		mg/L		30-Jun-2018 10:33	
		Client ID:		SeqNo: 4632279	PrepDate: 29-Jun-2018	DF: 1	

Mercury	< 0.0000300	0.000200
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Analyte	Sample ID:	Run ID:		Units:		Analysis Date:	
		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit
Mercury	LCS-129984	HG03_319005		mg/L		30-Jun-2018 10:40	
		Client ID:		SeqNo: 4632283	PrepDate: 29-Jun-2018	DF: 1	

Mercury	0.00511	0.000200	0.005	0	102	80 - 120
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Analyte	Sample ID:	Run ID:		Units:		Analysis Date:	
		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit
Mercury	HS18061322-02MS	HG03_319005		mg/L		30-Jun-2018 11:38	
		Client ID: USOR-AB-01-180626		SeqNo: 4632308	PrepDate: 29-Jun-2018	DF: 1	

Mercury	0.0047	0.000200	0.005	0.000023	93.5	75 - 125
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Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129984

Instrument: HG03

Method: SW7470

MSD	Sample ID:	HS18061322-02MSD	Units:	mg/L	Analysis Date: 30-Jun-2018 11:40				
Client ID:	USOR-AB-01-180626	Run ID:	HG03_319005	SeqNo:	4632309	PrepDate:	29-Jun-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	Limit Qual

Mercury	0.00472	0.000200	0.005	0.000023	93.9	75 - 125	0.0047	0.425	20
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The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 130041	Instrument: HG03	Method: SW7471A
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MLBK	Sample ID: MBLK-130041	Units: ug/Kg		Analysis Date: 03-Jul-2018 13:38					
Client ID:	Run ID: HG03_319106	SeqNo: 4634690	PrepDate: 03-Jul-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Mercury	< 0.470	3.32							

LCS	Sample ID: LCS-130041	Units: ug/Kg		Analysis Date: 03-Jul-2018 13:40					
Client ID:	Run ID: HG03_319106	SeqNo: 4634691	PrepDate: 03-Jul-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Mercury	332.7	3.32	333.3	0	99.8	80 - 120			

MS	Sample ID: HS18061333-01MS	Units: ug/Kg		Analysis Date: 03-Jul-2018 13:44					
Client ID:	Run ID: HG03_319106	SeqNo: 4634693	PrepDate: 03-Jul-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Mercury	625.9	3.49	350.1	264.6	103	80 - 120			

MSD	Sample ID: HS18061333-01MSD	Units: ug/Kg		Analysis Date: 03-Jul-2018 13:45					
Client ID:	Run ID: HG03_319106	SeqNo: 4634694	PrepDate: 03-Jul-2018	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Mercury	592.3	3.41	342.3	264.6	95.7	80 - 120	625.9	5.53	20

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270			
MBLK	Sample ID: MBLK-129918	Units: ug/Kg		Analysis Date: 02-Jul-2018 10:42			
Client ID:	Run ID: SV-6_318840			SeqNo: 4635430	PrepDate: 28-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
1,1'-Biphenyl	< 1.7	6.6					
1,2-Diphenylhydrazine	< 1.1	6.6					
2,4,5-Trichlorophenol	< 2.5	6.6					
2,4,6-Trichlorophenol	< 1.7	6.6					
2,4-Dichlorophenol	< 1.3	6.6					
2,4-Dimethylphenol	< 3.3	6.6					
2,4-Dinitrophenol	< 4.5	13					
2,4-Dinitrotoluene	< 0.90	6.6					
2,6-Dinitrotoluene	< 3.3	6.6					
2-Chloronaphthalene	< 1.3	6.6					
2-Chlorophenol	< 1.3	6.6					
2-Methylnaphthalene	< 0.50	3.3					
2-Methylphenol	< 1.1	6.6					
2-Nitroaniline	< 1.9	6.6					
2-Nitrophenol	< 2.5	6.6					
3&4-Methylphenol	< 1.0	6.6					
3,3'-Dichlorobenzidine	< 2.5	6.6					
3-Nitroaniline	< 1.9	6.6					
4,6-Dinitro-2-methylphenol	< 2.1	6.6					
4-Bromophenyl phenyl ether	< 1.6	6.6					
4-Chloro-3-methylphenol	< 0.70	6.6					
4-Chloroaniline	< 1.1	6.6					
4-Chlorophenyl phenyl ether	< 1.5	6.6					
4-Nitroaniline	< 2.2	6.6					
4-Nitrophenol	< 1.9	13					
Acenaphthene	< 0.50	3.3					
Acenaphthylene	< 1.0	3.3					
Acetophenone	< 0.80	6.6					
Anthracene	< 0.50	3.3					
Atrazine	< 2.0	6.6					
Benz(a)anthracene	< 1.6	3.3					
Benzaldehyde	< 1.2	6.6					
Benzidine	< 1.4	6.6					
Benzo(a)pyrene	< 1.0	3.3					

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270				
MLBK	Sample ID: MBLK-129918	Units: ug/Kg		Analysis Date: 02-Jul-2018 10:42				
Client ID:	Run ID: SV-6_318840			SeqNo: 4635430	PrepDate: 28-Jun-2018	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD	RPD Limit Qual
Benzo(b)fluoranthene	< 1.2	3.3						
Benzo(g,h,i)perylene	< 0.70	3.3						
Benzo(k)fluoranthene	< 0.90	3.3						
Bis(2-chloroethoxy)methane	< 0.90	6.6						
Bis(2-chloroethyl)ether	< 1.1	6.6						
Bis(2-chloroisopropyl)ether	< 1.4	6.6						
Bis(2-ethylhexyl)phthalate	< 1.7	6.6						
Butyl benzyl phthalate	< 1.3	6.6						
Caprolactam	< 1.2	6.6						
Carbazole	< 1.2	6.6						
Chrysene	< 0.80	3.3						
Dibenz(a,h)anthracene	< 1.6	3.3						
Dibenzofuran	< 0.70	3.3						
Diethyl phthalate	< 1.0	6.6						
Dimethyl phthalate	< 0.80	6.6						
Di-n-butyl phthalate	< 1.2	6.6						
Di-n-octyl phthalate	< 0.90	6.6						
Fluoranthene	< 1.1	3.3						
Fluorene	< 1.1	3.3						
Hexachlorobenzene	< 0.90	6.6						
Hexachlorobutadiene	< 1.2	6.6						
Hexachlorocyclopentadiene	< 0.80	6.6						
Hexachloroethane	< 1.5	6.6						
Indeno(1,2,3-cd)pyrene	< 0.80	3.3						
Isophorone	< 0.80	6.6						
Naphthalene	< 0.60	3.3						
Nitrobenzene	< 0.90	6.6						
N-Nitrosodimethylamine	< 1.2	6.6						
N-Nitrosodi-n-propylamine	< 1.1	6.6						
N-Nitrosodiphenylamine	< 0.70	6.6						
Pentachlorophenol	< 3.3	6.6						
Phenanthrene	< 1.5	3.3						
Phenol	< 1.1	6.6						
Pyrene	< 0.60	3.3						

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270				
MBLK	Sample ID: MBLK-129918	Units: ug/Kg		Analysis Date: 02-Jul-2018 10:42				
Client ID:	Run ID: SV-6_318840	SeqNo: 4635430		PrepDate: 28-Jun-2018	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD	RPD Limit Qual
Pyridine	< 0.90	6.6						
<i>Surr: 2,4,6-Tribromophenol</i>	148.3	0	167	0	88.8	36 - 126		
<i>Surr: 2-Fluorobiphenyl</i>	167.2	0	167	0	100	43 - 125		
<i>Surr: 2-Fluorophenol</i>	160.7	0	167	0	96.2	37 - 125		
<i>Surr: 4-Terphenyl-d14</i>	201.9	0	167	0	121	32 - 125		
<i>Surr: Nitrobenzene-d5</i>	166.6	0	167	0	99.8	37 - 125		
<i>Surr: Phenol-d6</i>	170.7	0	167	0	102	40 - 125		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270			
LCS	Sample ID: LCS-129918	Units: ug/Kg		Analysis Date: 02-Jul-2018 11:01			
Client ID:	Run ID: SV-6_318840	SeqNo: 4633085		PrepDate: 28-Jun-2018	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
1,1'-Biphenyl	129.2	6.6	167	0	77.3	50 - 120	
1,2-Diphenylhydrazine	159.9	6.6	167	0	95.8	50 - 135	
2,4,5-Trichlorophenol	145.6	6.6	167	0	87.2	45 - 127	
2,4,6-Trichlorophenol	137.1	6.6	167	0	82.1	45 - 130	
2,4-Dichlorophenol	145.2	6.6	167	0	86.9	45 - 125	
2,4-Dimethylphenol	128.7	6.6	167	0	77.0	45 - 120	
2,4-Dinitrophenol	132.9	13	167	0	79.6	10 - 126	
2,4-Dinitrotoluene	153.9	6.6	167	0	92.1	50 - 130	
2,6-Dinitrotoluene	155.1	6.6	167	0	92.9	50 - 125	
2-Chloronaphthalene	137.8	6.6	167	0	82.5	50 - 145	
2-Chlorophenol	144.3	6.6	167	0	86.4	45 - 120	
2-Methylnaphthalene	143.2	3.3	167	0	85.8	50 - 120	
2-Methylphenol	145.4	6.6	167	0	87.1	45 - 120	
2-Nitroaniline	178.7	6.6	167	0	107	45 - 138	
2-Nitrophenol	156	6.6	167	0	93.4	45 - 125	
3&4-Methylphenol	149.1	6.6	167	0	89.3	45 - 120	
3,3'-Dichlorobenzidine	193	6.6	167	0	116	15 - 120	
3-Nitroaniline	136.9	6.6	167	0	82.0	40 - 120	
4,6-Dinitro-2-methylphenol	162.2	6.6	167	0	97.1	15 - 135	
4-Bromophenyl phenyl ether	151.9	6.6	167	0	91.0	50 - 125	
4-Chloro-3-methylphenol	162.9	6.6	167	0	97.6	45 - 130	
4-Chloroaniline	136.7	6.6	167	0	81.9	20 - 120	
4-Chlorophenyl phenyl ether	137.1	6.6	167	0	82.1	50 - 120	
4-Nitroaniline	120.6	6.6	167	0	72.2	50 - 127	
4-Nitrophenol	175.5	13	167	0	105	40 - 147	
Acenaphthene	130.2	3.3	167	0	78.0	50 - 120	
Acenaphthylene	149.8	3.3	167	0	89.7	50 - 120	
Acetophenone	135.4	6.6	167	0	81.1	50 - 120	
Anthracene	152.3	3.3	167	0	91.2	50 - 123	
Atrazine	154.5	6.6	167	0	92.5	29 - 148	
Benz(a)anthracene	176.8	3.3	167	0	106	50 - 131	
Benzaldehyde	59.66	6.6	167	0	35.7	22 - 129	
Benzidine	146	6.6	167	0	87.4	10 - 120	
Benzo(a)pyrene	164.4	3.3	167	0	98.4	50 - 130	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270			
LCS	Sample ID: LCS-129918	Units: ug/Kg		Analysis Date: 02-Jul-2018 11:01			
Client ID:	Run ID: SV-6_318840			SeqNo: 4633085	PrepDate: 28-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
Benzo(b)fluoranthene	166.4	3.3	167	0	99.7	50 - 137	
Benzo(g,h,i)perylene	158.3	3.3	167	0	94.8	50 - 130	
Benzo(k)fluoranthene	153.9	3.3	167	0	92.1	50 - 143	
Bis(2-chloroethoxy)methane	142.6	6.6	167	0	85.4	50 - 120	
Bis(2-chloroethyl)ether	168.3	6.6	167	0	101	45 - 127	
Bis(2-chloroisopropyl)ether	154.7	6.6	167	0	92.6	50 - 120	
Bis(2-ethylhexyl)phthalate	205.9	6.6	167	0	123	21 - 148	
Butyl benzyl phthalate	203.5	6.6	167	0	122	50 - 136	
Caprolactam	159.7	6.6	167	0	95.6	50 - 135	
Carbazole	122.4	6.6	167	0	73.3	50 - 143	
Chrysene	168.6	3.3	167	0	101	50 - 130	
Dibenz(a,h)anthracene	169.4	3.3	167	0	101	50 - 130	
Dibenzofuran	136.9	3.3	167	0	82.0	50 - 125	
Diethyl phthalate	145.7	6.6	167	0	87.3	50 - 125	
Dimethyl phthalate	143.6	6.6	167	0	86.0	50 - 125	
Di-n-butyl phthalate	177.3	6.6	167	0	106	50 - 140	
Di-n-octyl phthalate	191.2	6.6	167	0	114	50 - 140	
Fluoranthene	167.4	3.3	167	0	100	50 - 131	
Fluorene	141.1	3.3	167	0	84.5	50 - 125	
Hexachlorobenzene	152.6	6.6	167	0	91.4	50 - 124	
Hexachlorobutadiene	137.7	6.6	167	0	82.4	50 - 125	
Hexachlorocyclopentadiene	119.5	6.6	167	0	71.6	45 - 135	
Hexachloroethane	143.1	6.6	167	0	85.7	45 - 125	
Indeno(1,2,3-cd)pyrene	174.6	3.3	167	0	105	45 - 139	
Isophorone	153.2	6.6	167	0	91.7	45 - 130	
Naphthalene	143.4	3.3	167	0	85.9	50 - 125	
Nitrobenzene	145.1	6.6	167	0	86.9	50 - 125	
N-Nitrosodimethylamine	122.1	6.6	167	0	73.1	20 - 140	
N-Nitrosodi-n-propylamine	139	6.6	167	0	83.2	45 - 120	
N-Nitrosodiphenylamine	149.1	6.6	167	0	89.3	50 - 130	
Pentachlorophenol	136.3	6.6	167	0	81.6	23 - 136	
Phenanthrene	150.1	3.3	167	0	89.9	50 - 125	
Phenol	134.7	6.6	167	0	80.7	45 - 130	
Pyrene	168.7	3.3	167	0	101	45 - 130	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270				
LCS	Sample ID: LCS-129918	Units: ug/Kg			Analysis Date: 02-Jul-2018 11:01			
Client ID:		Run ID: SV-6_318840		SeqNo: 4633085	PrepDate: 28-Jun-2018	DF: 1	RPD Ref Value	RPD %RPD Limit Qual
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Pyridine	126.6	6.6	167	0	75.8	15 - 120		
<i>Surr: 2,4,6-Tribromophenol</i>	144.6	0	167	0	86.6	36 - 126		
<i>Surr: 2-Fluorobiphenyl</i>	147.8	0	167	0	88.5	43 - 125		
<i>Surr: 2-Fluorophenol</i>	139.8	0	167	0	83.7	37 - 125		
<i>Surr: 4-Terphenyl-d14</i>	204.3	0	167	0	122	32 - 125		
<i>Surr: Nitrobenzene-d5</i>	155.3	0	167	0	93.0	37 - 125		
<i>Surr: Phenol-d6</i>	140.1	0	167	0	83.9	40 - 125		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270			
MS	Sample ID: HS18061365-01MS	Units: ug/Kg		Analysis Date: 02-Jul-2018 15:43			
Client ID:	Run ID: SV-6_318840	SeqNo: 4634496		PrepDate: 28-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
1,1'-Biphenyl	230.8	6.6	166.8	99.63	78.7	50 - 120	
1,2-Diphenylhydrazine	135.8	6.6	166.8	0	81.4	50 - 135	
2,4,5-Trichlorophenol	167.5	6.6	166.8	0	100	45 - 127	
2,4,6-Trichlorophenol	151.7	6.6	166.8	0	90.9	45 - 130	
2,4-Dichlorophenol	142.5	6.6	166.8	0	85.4	45 - 125	
2,4-Dimethylphenol	132.1	6.6	166.8	0	79.2	45 - 120	
2,4-Dinitrophenol	70.61	13	166.8	0	42.3	10 - 126	
2,4-Dinitrotoluene	199.5	6.6	166.8	0	120	50 - 130	
2,6-Dinitrotoluene	172.6	6.6	166.8	0	103	50 - 125	
2-Chloronaphthalene	126.1	6.6	166.8	0	75.6	50 - 145	
2-Chlorophenol	80.02	6.6	166.8	0	48.0	45 - 120	
2-Methylnaphthalene	822.1	3.3	166.8	671.3	90.5	50 - 120	EO
2-Methylphenol	83.11	6.6	166.8	0	49.8	45 - 120	
2-Nitroaniline	242.8	6.6	166.8	0	146	45 - 138	S
2-Nitrophenol	130.5	6.6	166.8	0	78.2	45 - 125	
3&4-Methylphenol	84.76	6.6	166.8	0	50.8	45 - 120	
3,3'-Dichlorobenzidine	31	6.6	166.8	0	18.6	15 - 120	
3-Nitroaniline	33.92	6.6	166.8	0	20.3	40 - 120	S
4,6-Dinitro-2-methylphenol	102.6	6.6	166.8	0	61.5	15 - 135	
4-Bromophenyl phenyl ether	139.2	6.6	166.8	0	83.5	50 - 125	
4-Chloro-3-methylphenol	145.8	6.6	166.8	0	87.4	45 - 130	
4-Chloroaniline	28.33	6.6	166.8	0	17.0	20 - 120	S
4-Chlorophenyl phenyl ether	139.5	6.6	166.8	0	83.7	50 - 120	
4-Nitroaniline	80	6.6	166.8	0	48.0	50 - 127	S
4-Nitrophenol	160.7	13	166.8	0	96.4	40 - 147	
Acenaphthene	143.4	3.3	166.8	0	86.0	50 - 120	
Acenaphthylene	150.4	3.3	166.8	0	90.2	50 - 120	
Acetophenone	676.2	6.6	166.8	0	405	50 - 120	SE
Anthracene	135.5	3.3	166.8	2.008	80.0	50 - 123	
Atrazine	136.6	6.6	166.8	0	81.9	29 - 148	
Benz(a)anthracene	166.4	3.3	166.8	4.376	97.2	50 - 131	
Benzaldehyde	134.3	6.6	166.8	0	80.6	22 - 129	
Benzidine	12.23	6.6	166.8	0	7.34	10 - 120	S
Benzo(a)pyrene	160.2	3.3	166.8	2.116	94.8	50 - 130	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270			
MS	Sample ID: HS18061365-01MS	Units: ug/Kg		Analysis Date: 02-Jul-2018 15:43			
Client ID:	Run ID: SV-6_318840			SeqNo: 4634496	PrepDate: 28-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
Benzo(b)fluoranthene	177.3	3.3	166.8	2.276	105	50 - 137	
Benzo(g,h,i)perylene	161.7	3.3	166.8	1.023	96.3	50 - 130	
Benzo(k)fluoranthene	144	3.3	166.8	0.897	85.8	50 - 143	
Bis(2-chloroethoxy)methane	142.6	6.6	166.8	0	85.5	50 - 120	
Bis(2-chloroethyl)ether	70.3	6.6	166.8	0	42.1	45 - 127	S
Bis(2-chloroisopropyl)ether	85.58	6.6	166.8	0	51.3	50 - 120	
Bis(2-ethylhexyl)phthalate	228.9	6.6	166.8	11.08	131	21 - 148	
Butyl benzyl phthalate	202.5	6.6	166.8	0	121	50 - 136	
Caprolactam	121.2	6.6	166.8	0	72.7	50 - 135	
Carbazole	56.53	6.6	166.8	1.899	32.8	50 - 143	S
Chrysene	154.5	3.3	166.8	4.834	89.8	50 - 130	
Dibenz(a,h)anthracene	163.7	3.3	166.8	0	98.1	50 - 130	
Dibenzofuran	151.2	3.3	166.8	23.38	76.6	50 - 125	
Diethyl phthalate	161.5	6.6	166.8	0	96.8	50 - 125	
Dimethyl phthalate	145.3	6.6	166.8	0	87.1	50 - 125	
Di-n-butyl phthalate	172.7	6.6	166.8	4.851	101	50 - 140	
Di-n-octyl phthalate	201.9	6.6	166.8	0	121	50 - 140	
Fluoranthene	154.1	3.3	166.8	8.522	87.3	50 - 131	
Fluorene	154.4	3.3	166.8	12.24	85.3	50 - 125	
Hexachlorobenzene	148.1	6.6	166.8	0	88.8	50 - 124	
Hexachlorobutadiene	110.3	6.6	166.8	0	66.1	50 - 125	
Hexachlorocyclopentadiene	53.11	6.6	166.8	0	31.8	45 - 135	S
Hexachloroethane	155.4	6.6	166.8	0	93.2	45 - 125	
Indeno(1,2,3-cd)pyrene	177.1	3.3	166.8	0.7621	106	45 - 139	
Isophorone	151.9	6.6	166.8	0	91.1	45 - 130	
Naphthalene	542.6	3.3	166.8	445.8	58.1	50 - 125	E
Nitrobenzene	176.1	6.6	166.8	0	106	50 - 125	
N-Nitrosodimethylamine	63.4	6.6	166.8	0	38.0	20 - 140	
N-Nitrosodi-n-propylamine	187.8	6.6	166.8	0	113	45 - 120	
N-Nitrosodiphenylamine	119.9	6.6	166.8	0	71.9	50 - 130	
Pentachlorophenol	146.6	6.6	166.8	0	87.9	23 - 136	
Phenanthrene	144	3.3	166.8	9.584	80.6	50 - 125	
Phenol	89.96	6.6	166.8	0	53.9	45 - 130	
Pyrene	178	3.3	166.8	8.079	102	45 - 130	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270				
MS	Sample ID: HS18061365-01MS	Units: ug/Kg		Analysis Date: 02-Jul-2018 15:43				
Client ID:	Run ID: SV-6_318840			SeqNo: 4634496	PrepDate: 28-Jun-2018	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD	RPD Limit Qual
Pyridine	62.27	6.6	166.8	0	37.3	15 - 120		
<i>Surr: 2,4,6-Tribromophenol</i>	147.7	0	166.8	0	88.6	36 - 126		
<i>Surr: 2-Fluorobiphenyl</i>	132.6	0	166.8	0	79.5	43 - 125		
<i>Surr: 2-Fluorophenol</i>	85.46	0	166.8	0	51.2	37 - 125		
<i>Surr: 4-Terphenyl-d14</i>	192.8	0	166.8	0	116	32 - 125		
<i>Surr: Nitrobenzene-d5</i>	133.1	0	166.8	0	79.8	37 - 125		
<i>Surr: Phenol-d6</i>	75.11	0	166.8	0	45.0	40 - 125		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270						
MSD	Sample ID: HS18061365-01MSD	Units: ug/Kg		Analysis Date: 02-Jul-2018 16:02						
Client ID:	Run ID: SV-6_318840			SeqNo: 4634497	PrepDate: 28-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
1,1'-Biphenyl	241.9	6.6	166.7	99.63	85.4	50 - 120	230.8	4.7	30	
1,2-Diphenylhydrazine	167.2	6.6	166.7	0	100	50 - 135	135.8	20.7	30	
2,4,5-Trichlorophenol	207	6.6	166.7	0	124	45 - 127	167.5	21.1	30	
2,4,6-Trichlorophenol	150.7	6.6	166.7	0	90.4	45 - 130	151.7	0.654	30	
2,4-Dichlorophenol	170	6.6	166.7	0	102	45 - 125	142.5	17.6	30	
2,4-Dimethylphenol	151.5	6.6	166.7	0	90.9	45 - 120	132.1	13.7	30	
2,4-Dinitrophenol	71.65	13	166.7	0	43.0	10 - 126	70.61	1.46	30	
2,4-Dinitrotoluene	191.8	6.6	166.7	0	115	50 - 130	199.5	3.94	30	
2,6-Dinitrotoluene	177.7	6.6	166.7	0	107	50 - 125	172.6	2.91	30	
2-Chloronaphthalene	126.9	6.6	166.7	0	76.2	50 - 145	126.1	0.677	30	
2-Chlorophenol	120.5	6.6	166.7	0	72.3	45 - 120	80.02	40.4	30	
2-Methylnaphthalene	928.3	3.3	166.7	671.3	154	50 - 120	822.1	12.1	30	
2-Methylphenol	129.5	6.6	166.7	0	77.7	45 - 120	83.11	43.7	30	
2-Nitroaniline	216.6	6.6	166.7	0	130	45 - 138	242.8	11.4	30	
2-Nitrophenol	251.1	6.6	166.7	0	151	45 - 125	130.5	63.2	30	
3&4-Methylphenol	134.6	6.6	166.7	0	80.8	45 - 120	84.76	45.5	30	
3,3'-Dichlorobenzidine	76.84	6.6	166.7	0	46.1	15 - 120	31	85	30	
3-Nitroaniline	114.2	6.6	166.7	0	68.5	40 - 120	33.92	108	30	
4,6-Dinitro-2-methylphenol	129.3	6.6	166.7	0	77.6	15 - 135	102.6	23	30	
4-Bromophenyl phenyl ether	161.9	6.6	166.7	0	97.2	50 - 125	139.2	15.1	30	
4-Chloro-3-methylphenol	192.6	6.6	166.7	0	116	45 - 130	145.8	27.6	30	
4-Chloroaniline	65.8	6.6	166.7	0	39.5	20 - 120	28.33	79.6	30	
4-Chlorophenyl phenyl ether	142.2	6.6	166.7	0	85.3	50 - 120	139.5	1.88	30	
4-Nitroaniline	81.86	6.6	166.7	0	49.1	50 - 127	80	2.3	30	
4-Nitrophenol	182.1	13	166.7	0	109	40 - 147	160.7	12.5	30	
Acenaphthene	128.9	3.3	166.7	0	77.3	50 - 120	143.4	10.7	30	
Acenaphthylene	150.6	3.3	166.7	0	90.4	50 - 120	150.4	0.108	30	
Acetophenone	615.6	6.6	166.7	0	369	50 - 120	676.2	9.39	30	
Anthracene	164.9	3.3	166.7	2.008	97.8	50 - 123	135.5	19.6	30	
Atrazine	166	6.6	166.7	0	99.6	29 - 148	136.6	19.4	30	
Benz(a)anthracene	170.4	3.3	166.7	4.376	99.6	50 - 131	166.4	2.34	30	
Benzaldehyde	96.68	6.6	166.7	0	58.0	22 - 129	134.3	32.6	30	
Benzidine	13.22	6.6	166.7	0	7.93	10 - 120	12.23	7.76	30	
Benzo(a)pyrene	155.1	3.3	166.7	2.116	91.8	50 - 130	160.2	3.23	30	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270						
MSD	Sample ID: HS18061365-01MSD	Units: ug/Kg		Analysis Date: 02-Jul-2018 16:02						
Client ID:	Run ID: SV-6_318840			SeqNo: 4634497	PrepDate: 28-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Benzo(b)fluoranthene	172.6	3.3	166.7	2.276	102	50 - 137	177.3	2.68	30	
Benzo(g,h,i)perylene	151.3	3.3	166.7	1.023	90.2	50 - 130	161.7	6.61	30	
Benzo(k)fluoranthene	150.6	3.3	166.7	0.897	89.8	50 - 143	144	4.43	30	
Bis(2-chloroethoxy)methane	181	6.6	166.7	0	109	50 - 120	142.6	23.7	30	
Bis(2-chloroethyl)ether	128	6.6	166.7	0	76.8	45 - 127	70.3	58.2	30	
Bis(2-chloroisopropyl)ether	115.1	6.6	166.7	0	69.1	50 - 120	85.58	29.4	30	
Bis(2-ethylhexyl)phthalate	225.2	6.6	166.7	11.08	128	21 - 148	228.9	1.65	30	
Butyl benzyl phthalate	205.4	6.6	166.7	0	123	50 - 136	202.5	1.43	30	
Caprolactam	1497	6.6	166.7	0	898	50 - 135	121.2	170	30 SRE	
Carbazole	91.69	6.6	166.7	1.899	53.9	50 - 143	56.53	47.4	30 R	
Chrysene	165.2	3.3	166.7	4.834	96.2	50 - 130	154.5	6.7	30	
Dibenz(a,h)anthracene	143.4	3.3	166.7	0	86.1	50 - 130	163.7	13.2	30	
Dibenzofuran	158.5	3.3	166.7	23.38	81.1	50 - 125	151.2	4.72	30	
Diethyl phthalate	154.8	6.6	166.7	0	92.9	50 - 125	161.5	4.21	30	
Dimethyl phthalate	149.9	6.6	166.7	0	89.9	50 - 125	145.3	3.09	30	
Di-n-butyl phthalate	204.4	6.6	166.7	4.851	120	50 - 140	172.7	16.8	30	
Di-n-octyl phthalate	185.4	6.6	166.7	0	111	50 - 140	201.9	8.52	30	
Fluoranthene	188.8	3.3	166.7	8.522	108	50 - 131	154.1	20.3	30	
Fluorene	150.7	3.3	166.7	12.24	83.1	50 - 125	154.4	2.42	30	
Hexachlorobenzene	173.2	6.6	166.7	0	104	50 - 124	148.1	15.6	30	
Hexachlorobutadiene	117.4	6.6	166.7	0	70.5	50 - 125	110.3	6.29	30	
Hexachlorocyclopentadiene	48.05	6.6	166.7	0	28.8	45 - 135	53.11	10	30 S	
Hexachloroethane	225.1	6.6	166.7	0	135	45 - 125	155.4	36.6	30 SR	
Indeno(1,2,3-cd)pyrene	169	3.3	166.7	0.7621	101	45 - 139	177.1	4.67	30	
Isophorone	268.4	6.6	166.7	0	161	45 - 130	151.9	55.4	30 SR	
Naphthalene	600.7	3.3	166.7	445.8	93.0	50 - 125	542.6	10.2	30 E	
Nitrobenzene	190	6.6	166.7	0	114	50 - 125	176.1	7.6	30	
N-Nitrosodimethylamine	85.17	6.6	166.7	0	51.1	20 - 140	63.4	29.3	30	
N-Nitrosodi-n-propylamine	226.7	6.6	166.7	0	136	45 - 120	187.8	18.8	30 S	
N-Nitrosodiphenylamine	167.8	6.6	166.7	0	101	50 - 130	119.9	33.3	30 R	
Pentachlorophenol	175.2	6.6	166.7	0	105	23 - 136	146.6	17.8	30	
Phenanthrene	174.1	3.3	166.7	9.584	98.7	50 - 125	144	18.9	30	
Phenol	131.1	6.6	166.7	0	78.7	45 - 130	89.96	37.2	30 R	
Pyrene	180.8	3.3	166.7	8.079	104	45 - 130	178	1.56	30	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129918		Instrument: SV-6		Method: SW8270						
MSD	Sample ID: HS18061365-01MSD	Units: ug/Kg		Analysis Date: 02-Jul-2018 16:02						
Client ID:	Run ID: SV-6_318840			SeqNo: 4634497	PrepDate: 28-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Pyridine	74.81	6.6	166.7	0	44.9	15 - 120	62.27	18.3	30	
<i>Surr: 2,4,6-Tribromophenol</i>	155.9	0	166.7	0	93.5	36 - 126	147.7	5.35	30	
<i>Surr: 2-Fluorobiphenyl</i>	138.3	0	166.7	0	83.0	43 - 125	132.6	4.21	30	
<i>Surr: 2-Fluorophenol</i>	117.7	0	166.7	0	70.6	37 - 125	85.46	31.7	30	
<i>Surr: 4-Terphenyl-d14</i>	205.7	0	166.7	0	123	32 - 125	192.8	6.46	30	
<i>Surr: Nitrobenzene-d5</i>	195.7	0	166.7	0	117	37 - 125	133.1	38	30	
<i>Surr: Phenol-d6</i>	119.4	0	166.7	0	71.6	40 - 125	75.11	45.5	30	

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129952		Instrument: SV-4		Method: SW1311/8270			
MLBK	Sample ID: MBLK-129952	Units: ug/L		Analysis Date: 29-Jun-2018 11:23			
Client ID:	Run ID: SV-4_318934			SeqNo: 4631022	PrepDate: 29-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
2,4,5-Trichlorophenol	< 0.90	5.0					RPD Limit Qual
2,4,6-Trichlorophenol	< 1.4	5.0					
2,4-Dinitrotoluene	< 1.0	5.0					
Cresols, Total	< 2.0	15					
Hexachlorobenzene	< 1.1	5.0					
Hexachlorobutadiene	< 1.1	5.0					
Hexachloroethane	< 1.0	5.0					
Nitrobenzene	< 0.80	5.0					
Pentachlorophenol	< 1.6	5.0					
Pyridine	< 2.0	5.0					
Surr: 2,4,6-Tribromophenol	115.3	5.0	100	0	115	39 - 153	
Surr: 2-Fluorobiphenyl	102.2	5.0	100	0	102	40 - 147	
Surr: 2-Fluorophenol	79.46	5.0	100	0	79.5	21 - 110	
Surr: 4-Terphenyl-d14	127.3	5.0	100	0	127	39 - 141	
Surr: Nitrobenzene-d5	87.79	5.0	100	0	87.8	37 - 140	
Surr: Phenol-d6	77.27	0	100	0	77.3	11 - 110	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129952		Instrument: SV-4		Method: SW1311/8270			
LCS	Sample ID: LCS-129952	Units: ug/L		Analysis Date: 29-Jun-2018 11:44			
Client ID:	Run ID: SV-4_318934			SeqNo: 4631023	PrepDate: 29-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
2,4,5-Trichlorophenol	98.22	5.0	100	0	98.2	55 - 120	
2,4,6-Trichlorophenol	97.82	5.0	100	0	97.8	55 - 120	
2,4-Dinitrotoluene	48.14	5.0	50	0	96.3	55 - 125	
Cresols, Total	207.2	15	250	0	82.9	48 - 115	
Hexachlorobenzene	52.68	5.0	50	0	105	55 - 120	
Hexachlorobutadiene	49.32	5.0	50	0	98.6	55 - 120	
Hexachloroethane	37.81	5.0	50	0	75.6	55 - 120	
Nitrobenzene	40.53	5.0	50	0	81.1	55 - 120	
Pentachlorophenol	88.82	5.0	100	0	88.8	50 - 135	
Pyridine	29.64	5.0	50	0	59.3	30 - 120	
<i>Surr: 2,4,6-Tribromophenol</i>	111.9	5.0	100	0	112	39 - 153	
<i>Surr: 2-Fluorobiphenyl</i>	101.5	5.0	100	0	102	40 - 147	
<i>Surr: 2-Fluorophenol</i>	81.79	5.0	100	0	81.8	21 - 110	
<i>Surr: 4-Terphenyl-d14</i>	119.3	5.0	100	0	119	39 - 141	
<i>Surr: Nitrobenzene-d5</i>	84.49	5.0	100	0	84.5	37 - 140	
<i>Surr: Phenol-d6</i>	76.87	0	100	0	76.9	11 - 110	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129952		Instrument: SV-4		Method: SW1311/8270					
LCSD	Sample ID: LCSD-129952			Units: ug/L		Analysis Date: 29-Jun-2018 12:04			
Client ID:		Run ID: SV-4_318934		SeqNo: 4631024		PrepDate: 29-Jun-2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
2,4,5-Trichlorophenol	94.77	5.0	100	0	94.8	55 - 120	98.22	3.57	20
2,4,6-Trichlorophenol	92.74	5.0	100	0	92.7	55 - 120	97.82	5.34	20
2,4-Dinitrotoluene	43.77	5.0	50	0	87.5	55 - 125	48.14	9.49	20
Cresols, Total	189.5	15	250	0	75.8	48 - 115	207.2	8.9	20
Hexachlorobenzene	50.2	5.0	50	0	100	55 - 120	52.68	4.84	20
Hexachlorobutadiene	49.23	5.0	50	0	98.5	55 - 120	49.32	0.185	20
Hexachloroethane	39.09	5.0	50	0	78.2	55 - 120	37.81	3.33	20
Nitrobenzene	36.98	5.0	50	0	74.0	55 - 120	40.53	9.15	20
Pentachlorophenol	85.61	5.0	100	0	85.6	50 - 135	88.82	3.68	20
Pyridine	30.31	5.0	50	0	60.6	30 - 120	29.64	2.23	20
<i>Surr: 2,4,6-Tribromophenol</i>	105.8	5.0	100	0	106	39 - 153	111.9	5.61	20
<i>Surr: 2-Fluorobiphenyl</i>	98.41	5.0	100	0	98.4	40 - 147	101.5	3.13	20
<i>Surr: 2-Fluorophenol</i>	78.5	5.0	100	0	78.5	21 - 110	81.79	4.11	20
<i>Surr: 4-Terphenyl-d14</i>	110.1	5.0	100	0	110	39 - 141	119.3	8.01	20
<i>Surr: Nitrobenzene-d5</i>	76.61	5.0	100	0	76.6	37 - 140	84.49	9.79	20
<i>Surr: Phenol-d6</i>	70.89	0	100	0	70.9	11 - 110	76.87	8.09	20

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129952		Instrument: SV-4		Method: SW1311/8270			
MS	Sample ID: HS18061286-01MS	Units: ug/L		Analysis Date: 29-Jun-2018 19:19			
Client ID:	Run ID: SV-4_318934			SeqNo: 4632807	PrepDate: 29-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
2,4,5-Trichlorophenol	101.8	5.2	103.1	0	98.8	55 - 120	
2,4,6-Trichlorophenol	88.28	5.2	103.1	0	85.6	55 - 120	
2,4-Dinitrotoluene	45.75	5.2	51.55	0	88.8	55 - 125	
Cresols, Total	213.1	15	257.7	0	82.7	48 - 115	
Hexachlorobenzene	45.32	5.2	51.55	0	87.9	55 - 120	
Hexachlorobutadiene	40.83	5.2	51.55	0	79.2	55 - 120	
Hexachloroethane	34.4	5.2	51.55	0	66.7	55 - 120	
Nitrobenzene	34.89	5.2	51.55	0	67.7	55 - 120	
Pentachlorophenol	66.75	5.2	103.1	0	64.7	50 - 135	
Pyridine	30.77	5.2	51.55	0	59.7	30 - 120	
<i>Surr: 2,4,6-Tribromophenol</i>	121.5	5.2	103.1	0	118	39 - 153	
<i>Surr: 2-Fluorobiphenyl</i>	84.32	5.2	103.1	0	81.8	40 - 147	
<i>Surr: 2-Fluorophenol</i>	80.66	5.2	103.1	0	78.2	21 - 110	
<i>Surr: 4-Terphenyl-d14</i>	99.52	5.2	103.1	0	96.5	39 - 141	
<i>Surr: Nitrobenzene-d5</i>	72.34	5.2	103.1	0	70.2	37 - 140	
<i>Surr: Phenol-d6</i>	79.79	0	103.1	0	77.4	11 - 110	

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129940		Instrument: VOA2		Method: SW1311/8260B				
MLBK	Sample ID: MBLK-129940 062818	Units: ug/L		Analysis Date: 03-Jul-2018 00:14				
Client ID:	Run ID: VOA2_319091	SeqNo: 4634298	PrepDate: 28-Jun-2018	DF: 20	SPK Ref Value	Control Limit	RPD Ref Value %RPD	RPD Limit Qual
Analyte	Result	PQL	SPK Val					
1,1-Dichloroethene	< 10	100						
1,2-Dichloroethane	< 10	100						
1,4-Dichlorobenzene	< 12	100						
2-Butanone	< 20	200						
Benzene	< 12	100						
Carbon tetrachloride	< 12	100						
Chlorobenzene	< 8.0	100						
Chloroform	< 12	100						
Tetrachloroethene	< 12	100						
Trichloroethene	< 10	100						
Vinyl chloride	< 8.0	40						
<i>Surr: 1,2-Dichloroethane-d4</i>	788.2	100	1000	0	78.8	70 - 123		
<i>Surr: 4-Bromofluorobenzene</i>	1002	100	1000	0	100	83 - 122		
<i>Surr: Dibromofluoromethane</i>	995	100	1000	0	99.5	73 - 126		
<i>Surr: Toluene-d8</i>	1048	100	1000	0	105	81 - 119		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129940		Instrument: VOA2		Method: SW1311/8260B				
LCS	Sample ID: VLCSW-129940 062818	Units: ug/L			Analysis Date: 02-Jul-2018 23:00			
Client ID:	Run ID: VOA2_319091	SeqNo: 4634296		PrepDate:	DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
1,1-Dichloroethene	44.02	5.0	50	0	88.0	70 - 130		
1,2-Dichloroethane	45.53	5.0	50	0	91.1	70 - 124		
1,4-Dichlorobenzene	44.61	5.0	50	0	89.2	79 - 113		
2-Butanone	93.5	10	100	0	93.5	70 - 130		
Benzene	44.87	5.0	50	0	89.7	74 - 120		
Carbon tetrachloride	47.3	5.0	50	0	94.6	71 - 125		
Chlorobenzene	45.03	5.0	50	0	90.1	76 - 113		
Chloroform	43.29	5.0	50	0	86.6	71 - 121		
Tetrachloroethene	44.34	5.0	50	0	88.7	76 - 119		
Trichloroethene	47.89	5.0	50	0	95.8	79 - 120		
Vinyl chloride	42.01	2.0	50	0	84.0	70 - 130		
Surr: 1,2-Dichloroethane-d4	41.35	5.0	50	0	82.7	70 - 130		
Surr: 4-Bromofluorobenzene	52.08	5.0	50	0	104	83 - 122		
Surr: Dibromofluoromethane	46.24	5.0	50	0	92.5	73 - 126		
Surr: Toluene-d8	50.34	5.0	50	0	101	81 - 119		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129940		Instrument: VOA2		Method: SW1311/8260B				
MS	Sample ID: HS18061322-01MS	Units: ug/L		Analysis Date: 03-Jul-2018 01:53				
Client ID:	USOR-CT-01-180626	Run ID: VOA2_319091		SeqNo: 4634300	PrepDate:	DF: 20		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
1,1-Dichloroethene	958.8	100	1000	0	95.9	70 - 130		
1,2-Dichloroethane	926.3	100	1000	0	92.6	70 - 127		
1,4-Dichlorobenzene	790.4	100	1000	0	79.0	70 - 114		
2-Butanone	2036	200	2000	0	102	70 - 130		
Benzene	903.4	100	1000	36.51	86.7	70 - 127		
Carbon tetrachloride	988.5	100	1000	0	98.9	70 - 130		
Chlorobenzene	839.7	100	1000	0	84.0	70 - 114		
Chloroform	873.9	100	1000	0	87.4	70 - 125		
Tetrachloroethene	823.2	100	1000	0	82.3	70 - 130		
Trichloroethene	877.7	100	1000	0	87.8	70 - 129		
Vinyl chloride	934.9	40	1000	0	93.5	70 - 130		
Surr: 1,2-Dichloroethane-d4	915.1	100	1000	0	91.5	70 - 126		
Surr: 4-Bromofluorobenzene	1041	100	1000	0	104	82 - 124		
Surr: Dibromofluoromethane	968.9	100	1000	0	96.9	77 - 123		
Surr: Toluene-d8	1017	100	1000	0	102	82 - 127		

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260				
MBLK	Sample ID: MBLKW1-070218	Units: ug/Kg		Analysis Date: 02-Jul-2018 20:06				
Client ID:	Run ID: VOA8_319074	SeqNo: 4633719		PrepDate:	DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
1,1,1-Trichloroethane	< 25	250						
1,1,2,2-Tetrachloroethane	< 40	250						
1,1,2-Trichlor-1,2,2-trifluoroethane	< 35	250						
1,1,2-Trichloroethane	< 25	250						
1,1-Dichloroethane	< 25	250						
1,2,4-Trichlorobenzene	< 50	250						
1,2-Dibromo-3-chloropropane	< 50	250						
1,2-Dibromoethane	< 25	250						
1,2-Dichlorobenzene	< 50	250						
1,2-Dichloroethane	< 30	250						
1,2-Dichloropropane	< 40	250						
1,3-Dichlorobenzene	< 50	250						
1,4-Dichlorobenzene	< 50	250						
2-Butanone	< 65	500						
2-Chloroethyl vinyl ether	< 100	500						
2-Hexanone	< 70	500						
4-Methyl-2-pentanone	< 100	500						
Acetone	< 100	1000						
Acrolein	< 100	1000						
Acrylonitrile	< 120	500						
Benzene	< 25	250						
Bromodichloromethane	< 25	250						
Bromoform	< 30	250						
Bromomethane	< 50	500						
Carbon disulfide	< 30	500						
Carbon tetrachloride	< 30	250						
Chlorobenzene	< 30	250						
Chloroethane	< 40	500						
Chloroform	< 25	250						
Chloromethane	< 25	500						
cis-1,2-Dichloroethene	< 40	250						
cis-1,3-Dichloropropene	< 25	250						
Cyclohexane	< 50	250						
Dibromochloromethane	< 25	250						

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260			
MBLK	Sample ID: MBLKW1-070218	Units: ug/Kg		Analysis Date: 02-Jul-2018 20:06			
Client ID:	Run ID: VOA8_319074			SeqNo: 4633719	PrepDate:	DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
Dichlorodifluoromethane	< 35	250					
Ethylbenzene	< 35	250					
Isopropylbenzene	< 45	250					
m,p-Xylene	< 80	500					
Methyl acetate	< 35	250					
Methyl tert-butyl ether	< 25	250					
Methylcyclohexane	< 50	250					
Methylene chloride	< 50	500					
o-Xylene	< 50	250					
Styrene	< 35	250					
Tetrachloroethene	< 35	250					
Toluene	< 30	250					
trans-1,2-Dichloroethene	< 25	250					
trans-1,3-Dichloropropene	< 30	250					
Trichloroethene	< 30	250					
Trichlorofluoromethane	< 25	250					
Vinyl chloride	< 40	100					
Xylenes, Total	< 50	250					
Surr: 1,2-Dichloroethane-d4	2637	0	2500	0	105	76 - 125	
Surr: 4-Bromofluorobenzene	2094	0	2500	0	83.8	83 - 120	
Surr: Dibromofluoromethane	2550	0	2500	0	102	80 - 119	
Surr: Toluene-d8	2607	0	2500	0	104	81 - 118	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260			
LCS	Sample ID: VLCSW1-070218	Units: ug/Kg		Analysis Date: 02-Jul-2018 19:12			
Client ID:	Run ID: VOA8_319074	SeqNo: 4633718		PrepDate:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
1,1,1-Trichloroethane	52.76	5.0	50	0	106	72 - 130	
1,1,2,2-Tetrachloroethane	54.57	5.0	50	0	109	71 - 124	
1,1,2-Trichlor-1,2,2-trifluoroethane	54.45	5.0	50	0	109	70 - 130	
1,1,2-Trichloroethane	51.38	5.0	50	0	103	78 - 117	
1,1-Dichloroethane	51.78	5.0	50	0	104	76 - 128	
1,2,4-Trichlorobenzene	53.35	5.0	50	0	107	70 - 128	
1,2-Dibromo-3-chloropropane	52.03	5.0	50	0	104	70 - 128	
1,2-Dibromoethane	51.65	5.0	50	0	103	78 - 120	
1,2-Dichlorobenzene	51.91	5.0	50	0	104	79 - 121	
1,2-Dichloroethane	50.37	5.0	50	0	101	77 - 120	
1,2-Dichloropropane	52.74	5.0	50	0	105	77 - 121	
1,3-Dichlorobenzene	50.55	5.0	50	0	101	78 - 121	
1,4-Dichlorobenzene	50.79	5.0	50	0	102	78 - 120	
2-Butanone	102.9	10	100	0	103	70 - 128	
2-Chloroethyl vinyl ether	102.5	10	100	0	103	65 - 128	
2-Hexanone	103.1	10	100	0	103	72 - 127	
4-Methyl-2-pentanone	85.53	10	100	0	85.5	70 - 128	
Acetone	105.5	20	100	0	105	70 - 130	
Acrolein	108.9	20	100	0	109	76 - 120	
Acrylonitrile	101.3	10	100	0	101	72 - 126	
Benzene	51.73	5.0	50	0	103	75 - 124	
Bromodichloromethane	51.35	5.0	50	0	103	78 - 122	
Bromoform	51.93	5.0	50	0	104	74 - 120	
Bromomethane	52.98	10	50	0	106	70 - 130	
Carbon disulfide	106.9	10	100	0	107	70 - 122	
Carbon tetrachloride	52.17	5.0	50	0	104	72 - 128	
Chlorobenzene	51.63	5.0	50	0	103	78 - 122	
Chloroethane	49.93	10	50	0	99.9	70 - 130	
Chloroform	50.22	5.0	50	0	100	73 - 127	
Chloromethane	48.59	10	50	0	97.2	70 - 130	
cis-1,2-Dichloroethene	52.18	5.0	50	0	104	77 - 125	
cis-1,3-Dichloropropene	51.08	5.0	50	0	102	78 - 122	
Cyclohexane	52.32	5.0	50	0	105	74 - 126	
Dibromochloromethane	51.61	5.0	50	0	103	78 - 120	

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260				
LCS	Sample ID: VLCSW1-070218	Units: ug/Kg		Analysis Date: 02-Jul-2018 19:12				
Client ID:	Run ID: VOA8_319074			SeqNo: 4633718	PrepDate:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD	RPD Limit Qual
Dichlorodifluoromethane	51.93	5.0	50	0	104	70 - 130		
Ethylbenzene	52.92	5.0	50	0	106	70 - 123		
Isopropylbenzene	52.19	5.0	50	0	104	78 - 127		
m,p-Xylene	107.1	10	100	0	107	77 - 125		
Methyl acetate	57.28	5.0	50	0	115	69 - 123		
Methyl tert-butyl ether	50.64	5.0	50	0	101	70 - 128		
Methylcyclohexane	53.27	5.0	50	0	107	77 - 127		
Methylene chloride	50.73	10	50	0	101	71 - 125		
o-Xylene	53.26	5.0	50	0	107	78 - 122		
Styrene	50.77	5.0	50	0	102	80 - 123		
Tetrachloroethene	52.7	5.0	50	0	105	70 - 130		
Toluene	51.96	5.0	50	0	104	76 - 122		
trans-1,2-Dichloroethene	52.88	5.0	50	0	106	75 - 128		
trans-1,3-Dichloropropene	51.08	5.0	50	0	102	75 - 123		
Trichloroethene	51.98	5.0	50	0	104	78 - 125		
Trichlorofluoromethane	53.33	5.0	50	0	107	70 - 130		
Vinyl chloride	50.94	2.0	50	0	102	70 - 130		
Xylenes, Total	160.4	5.0	150	0	107	77 - 128		
Surr: 1,2-Dichloroethane-d4	50.82	0	50	0	102	76 - 125		
Surr: 4-Bromofluorobenzene	52.28	0	50	0	105	83 - 120		
Surr: Dibromofluoromethane	48.59	0	50	0	97.2	80 - 119		
Surr: Toluene-d8	50.19	0	50	0	100	81 - 118		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260			
MS	Sample ID: HS18061424-03MS	Units: ug/Kg		Analysis Date: 02-Jul-2018 23:09			
Client ID:	Run ID: VOA8_319074	SeqNo: 4633726		PrepDate:		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
1,1,1-Trichloroethane	3240	250	2475	0	131	70 - 130	S
1,1,2,2-Tetrachloroethane	90.56	250	2475	0	3.66	70 - 130	JS
1,1,2-Trichlor-1,2,2-trifluoroethane	3207	250	2475	0	130	70 - 130	
1,1,2-Trichloroethane	2893	250	2475	0	117	70 - 130	
1,1-Dichloroethane	3168	250	2475	0	128	70 - 130	
1,2,4-Trichlorobenzene	4916	250	2475	1262	148	70 - 130	S
1,2-Dibromo-3-chloropropane	2901	250	2475	0	117	70 - 130	
1,2-Dibromoethane	2950	250	2475	0	119	70 - 120	
1,2-Dichlorobenzene	3186	250	2475	0	129	70 - 130	
1,2-Dichloroethane	3023	250	2475	0	122	70 - 130	
1,2-Dichloropropane	3229	250	2475	0	130	70 - 130	S
1,3-Dichlorobenzene	2975	250	2475	8.343	120	70 - 130	
1,4-Dichlorobenzene	3077	250	2475	9.934	124	70 - 130	
2-Butanone	4606	500	4950	409.2	84.8	70 - 130	
2-Chloroethyl vinyl ether	6918	500	4950	0	140	65 - 128	S
2-Hexanone	26280	500	4950	3744	455	70 - 130	SE
4-Methyl-2-pentanone	13450	500	4950	0	272	70 - 128	S
Acetone	7217	990	4950	0	146	70 - 130	S
Acrolein	4660	990	4950	0	94.2	70 - 130	
Acrylonitrile	5984	500	4950	0	121	70 - 130	
Benzene	3193	250	2475	0	129	70 - 130	
Bromodichloromethane	3061	250	2475	0	124	70 - 130	
Bromoform	3169	250	2475	0	128	70 - 130	
Bromomethane	1913	500	2475	28.37	76.1	70 - 130	
Carbon disulfide	6071	500	4950	0	123	70 - 130	
Carbon tetrachloride	3276	250	2475	414.1	116	70 - 130	
Chlorobenzene	3175	250	2475	0	128	70 - 130	
Chloroethane	1559	500	2475	0	63.0	70 - 130	S
Chloroform	2966	250	2475	0	120	70 - 130	
Chloromethane	2999	500	2475	0	121	70 - 130	
cis-1,2-Dichloroethene	3158	250	2475	0	128	70 - 130	
cis-1,3-Dichloropropene	3051	250	2475	0	123	70 - 130	
Cyclohexane	3254	250	2475	117.5	127	74 - 126	
Dibromochloromethane	2946	250	2475	0	119	70 - 130	S

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260				
MS	Sample ID: HS18061424-03MS	Units: ug/Kg		Analysis Date: 02-Jul-2018 23:09				
Client ID:	Run ID: VOA8_319074	SeqNo: 4633726		PrepDate:		DF: 50		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD	RPD Limit Qual
Dichlorodifluoromethane	2735	250	2475	0	110	70 - 130		
Ethylbenzene	4435	250	2475	783.5	148	70 - 130		S
Isopropylbenzene	4035	250	2475	567.1	140	70 - 130		S
m,p-Xylene	14740	500	4950	5481	187	70 - 130		S
Methyl acetate	3471	250	2475	0	140	69 - 123		S
Methyl tert-butyl ether	2982	250	2475	0	120	70 - 130		
Methylcyclohexane	3590	250	2475	74.91	142	77 - 127		S
Methylene chloride	3138	500	2475	82.76	123	70 - 130		
o-Xylene	7480	250	2475	2784	190	70 - 130		S
Styrene	3415	250	2475	211.5	129	70 - 130		
Tetrachloroethene	3168	250	2475	0	128	70 - 130		
Toluene	3074	250	2475	30.73	123	70 - 130		
trans-1,2-Dichloroethene	3171	250	2475	0	128	70 - 130		
trans-1,3-Dichloropropene	3051	250	2475	0	123	70 - 130		
Trichloroethene	5435	250	2475	0	220	70 - 130		S
Trichlorofluoromethane	1184	250	2475	0	47.8	70 - 130		S
Vinyl chloride	2872	99	2475	0	116	70 - 130		
Xylenes, Total	22220	250	7425	8265	188	70 - 130		S
<i>Surr: 1,2-Dichloroethane-d4</i>	2687	0	2475	0	109	70 - 126		
<i>Surr: 4-Bromofluorobenzene</i>	2912	0	2475	0	118	70 - 130		
<i>Surr: Dibromofluoromethane</i>	2547	0	2475	0	103	70 - 130		
<i>Surr: Toluene-d8</i>	2337	0	2475	0	94.4	70 - 130		

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260					
MSD	Sample ID: HS18061424-03MSD	Units: ug/Kg		Analysis Date: 02-Jul-2018 23:34					
Client ID:	Run ID: VOA8_319074	SeqNo: 4633727		PrepDate:		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
1,1,1-Trichloroethane	3064	250	2475	0	124	70 - 130	3240	5.58	30
1,1,2,2-Tetrachloroethane	106.1	250	2475	0	4.29	70 - 130	90.56	0	30
1,1,2-Trichlor-1,2,2-trifluoroethane	2897	250	2475	0	117	70 - 130	3207	10.1	30
1,1,2-Trichloroethane	2788	250	2475	0	113	70 - 130	2893	3.7	30
1,1-Dichloroethane	2959	250	2475	0	120	70 - 130	3168	6.83	30
1,2,4-Trichlorobenzene	5024	250	2475	1262	152	70 - 130	4916	2.16	30
1,2-Dibromo-3-chloropropane	2866	250	2475	0	116	70 - 130	2901	1.21	30
1,2-Dibromoethane	2853	250	2475	0	115	70 - 120	2950	3.36	30
1,2-Dichlorobenzene	3142	250	2475	0	127	70 - 130	3186	1.38	30
1,2-Dichloroethane	2861	250	2475	0	116	70 - 130	3023	5.5	30
1,2-Dichloropropane	3129	250	2475	0	126	70 - 130	3229	3.14	30
1,3-Dichlorobenzene	2974	250	2475	8.343	120	70 - 130	2975	0.0446	30
1,4-Dichlorobenzene	3006	250	2475	9.934	121	70 - 130	3077	2.35	30
2-Butanone	4259	500	4950	409.2	77.8	70 - 130	4606	7.82	30
2-Chloroethyl vinyl ether	6626	500	4950	0	134	65 - 128	6918	4.31	30
2-Hexanone	26060	500	4950	3744	451	70 - 130	26280	0.845	30
4-Methyl-2-pentanone	13390	500	4950	0	271	70 - 128	13450	0.418	30
Acetone	6514	990	4950	0	132	70 - 130	7217	10.2	30
Acrolein	4170	990	4950	0	84.2	70 - 130	4660	11.1	30
Acrylonitrile	5626	500	4950	0	114	70 - 130	5984	6.15	30
Benzene	3095	250	2475	0	125	70 - 130	3193	3.12	30
Bromodichloromethane	2912	250	2475	0	118	70 - 130	3061	4.99	30
Bromoform	3081	250	2475	0	124	70 - 130	3169	2.81	30
Bromomethane	1795	500	2475	28.37	71.4	70 - 130	1913	6.33	30
Carbon disulfide	5759	500	4950	0	116	70 - 130	6071	5.27	30
Carbon tetrachloride	3118	250	2475	414.1	109	70 - 130	3276	4.93	30
Chlorobenzene	3071	250	2475	0	124	70 - 130	3175	3.33	30
Chloroethane	1423	500	2475	0	57.5	70 - 130	1559	9.16	30
Chloroform	2796	250	2475	0	113	70 - 130	2966	5.9	30
Chloromethane	2748	500	2475	0	111	70 - 130	2999	8.72	30
cis-1,2-Dichloroethene	2959	250	2475	0	120	70 - 130	3158	6.5	30
cis-1,3-Dichloropropene	2926	250	2475	0	118	70 - 130	3051	4.19	30
Cyclohexane	3277	250	2475	117.5	128	74 - 126	3254	0.709	30
Dibromochloromethane	2843	250	2475	0	115	70 - 130	2946	3.54	30

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319074		Instrument: VOA8		Method: SW8260					
MSD	Sample ID: HS18061424-03MSD	Units: ug/Kg		Analysis Date: 02-Jul-2018 23:34					
Client ID:	Run ID: VOA8_319074	SeqNo: 4633727		PrepDate:		DF: 50			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Dichlorodifluoromethane	2459	250	2475	0	99.4	70 - 130	2735	10.6	30
Ethylbenzene	4332	250	2475	783.5	143	70 - 130	4435	2.35	30
Isopropylbenzene	3924	250	2475	567.1	136	70 - 130	4035	2.8	30
m,p-Xylene	14420	500	4950	5481	181	70 - 130	14740	2.22	30
Methyl acetate	3289	250	2475	0	133	69 - 123	3471	5.37	30
Methyl tert-butyl ether	2780	250	2475	0	112	70 - 130	2982	6.99	30
Methylcyclohexane	3331	250	2475	74.91	132	77 - 127	3590	7.48	30
Methylene chloride	2979	500	2475	82.76	117	70 - 130	3138	5.22	30
o-Xylene	7368	250	2475	2784	185	70 - 130	7480	1.51	30
Styrene	3328	250	2475	211.5	126	70 - 130	3415	2.59	30
Tetrachloroethene	3101	250	2475	0	125	70 - 130	3168	2.15	30
Toluene	2974	250	2475	30.73	119	70 - 130	3074	3.3	30
trans-1,2-Dichloroethene	3058	250	2475	0	124	70 - 130	3171	3.62	30
trans-1,3-Dichloropropene	2926	250	2475	0	118	70 - 130	3051	4.19	30
Trichloroethene	5281	250	2475	0	213	70 - 130	5435	2.88	30
Trichlorofluoromethane	1069	250	2475	0	43.2	70 - 130	1184	10.2	30
Vinyl chloride	2817	99	2475	0	114	70 - 130	2872	1.95	30
Xylenes, Total	21790	250	7425	8265	182	70 - 130	22220	1.98	30
Surr: 1,2-Dichloroethane-d4	2511	0	2475	0	101	70 - 126	2687	6.76	30
Surr: 4-Bromofluorobenzene	2874	0	2475	0	116	70 - 130	2912	1.3	30
Surr: Dibromofluoromethane	2491	0	2475	0	101	70 - 130	2547	2.19	30
Surr: Toluene-d8	2349	0	2475	0	94.9	70 - 130	2337	0.504	30

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129869		Instrument: Balance1		Method: E1664			
MLBK	Sample ID: MBLK-129869			Units: mg/Kg		Analysis Date: 02-Jul-2018 14:30	
Client ID:		Run ID: Balance1_319063		SeqNo: 4633588	PrepDate: 27-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Oil and Grease	< 100	100					
LCS	Sample ID: LCS-129869			Units: mg/Kg		Analysis Date: 02-Jul-2018 14:30	
Client ID:		Run ID: Balance1_319063		SeqNo: 4633587	PrepDate: 27-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Oil and Grease	2453	100	2667	0	92.0	70 - 130	
MS	Sample ID: HS18061286-01MS			Units: mg/Kg		Analysis Date: 02-Jul-2018 14:30	
Client ID:		Run ID: Balance1_319063		SeqNo: 4633580	PrepDate: 27-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Oil and Grease	2807	100	2667	332.7	92.8	70 - 130	
DUP	Sample ID: HS18061286-01DUP			Units: mg/Kg		Analysis Date: 02-Jul-2018 14:30	
Client ID:		Run ID: Balance1_319063		SeqNo: 4633579	PrepDate: 27-Jun-2018	DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD Limit Qual
Oil and Grease	338.6	100				332.7	1.78 30
The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03							

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129925

Instrument: UV-2450

Method: SW9014

MLBK	Sample ID:	MLBK-129925	Units:	mg/Kg	Analysis Date: 28-Jun-2018 13:20			
Client ID:	Run ID:	UV-2450_318851	SeqNo:	4629255	PrepDate:	28-Jun-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	< 0.300	2.00						

LCS	Sample ID:	LCS-129925	Units:	mg/Kg	Analysis Date: 28-Jun-2018 13:20			
Client ID:	Run ID:	UV-2450_318851	SeqNo:	4629254	PrepDate:	28-Jun-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	8.85	2.00	10	0	88.5	80 - 120		

MS	Sample ID:	HS18060939-03MS	Units:	mg/Kg	Analysis Date: 28-Jun-2018 13:20			
Client ID:	Run ID:	UV-2450_318851	SeqNo:	4629252	PrepDate:	28-Jun-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	8.087	1.96	9.802	0.04928	82.0	75 - 125		

MSD	Sample ID:	HS18060939-03MSD	Units:	mg/Kg	Analysis Date: 28-Jun-2018 13:20			
Client ID:	Run ID:	UV-2450_318851	SeqNo:	4629253	PrepDate:	28-Jun-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	7.77	1.90	9.475	0.04928	81.5	75 - 125	8.087	4 30

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 129987		Instrument: UV-2450		Method: SW7196					
<b>MLBK</b>	Sample ID: MBLK-129987			Units: mg/kg		Analysis Date: 02-Jul-2018 14:15			
Client ID:		Run ID: UV-2450_319049		SeqNo: 4633372	PrepDate: 02-Jul-2018	DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium, Hexavalent	< 0.300	2.00							
<b>LCS</b>	Sample ID: LCS-129987			Units: mg/kg		Analysis Date: 02-Jul-2018 14:15			
Client ID:		Run ID: UV-2450_319049		SeqNo: 4633371	PrepDate: 02-Jul-2018	DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium, Hexavalent	9.36	2.00	10	0	93.6	80 - 120			
<b>MS</b>	Sample ID: HS18061322-03MS			Units: mg/kg		Analysis Date: 02-Jul-2018 14:15			
Client ID: USOR-AB-02-180626		Run ID: UV-2450_319049		SeqNo: 4633368	PrepDate: 02-Jul-2018	DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium, Hexavalent	4.719	2.00	9.998	0.07997	46.4	75 - 125			S
<b>MSD</b>	Sample ID: HS18061322-03MSD			Units: mg/kg		Analysis Date: 02-Jul-2018 14:15			
Client ID: USOR-AB-02-180626		Run ID: UV-2450_319049		SeqNo: 4633369	PrepDate: 02-Jul-2018	DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium, Hexavalent	4.199	1.98	9.903	0.07997	41.6	75 - 125	4.719	11.7 20	S
<b>PDS</b>	Sample ID: HS18061322-03PDS			Units: mg/kg		Analysis Date: 02-Jul-2018 14:15			
Client ID: USOR-AB-02-180626		Run ID: UV-2450_319049		SeqNo: 4633370	PrepDate: 02-Jul-2018	DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chromium, Hexavalent	10.12	2.00	10	0.07997	100	80 - 120			
The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03									

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

<b>Batch ID:</b> 130008	<b>Instrument:</b> UV-2450	<b>Method:</b> SW9065
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MLBK	Sample ID:	MLBK-130008	Units:	mg/kg	Analysis Date: 02-Jul-2018 15:49			
Client ID:	Run ID:	UV-2450_319045	SeqNo:	4633209	PrepDate:	02-Jul-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Phenolics, Total Recoverable	< 1.00	2.50						

LCS	Sample ID:	LCS-130008	Units:	mg/kg	Analysis Date: 02-Jul-2018 15:49			
Client ID:	Run ID:	UV-2450_319045	SeqNo:	4633208	PrepDate:	02-Jul-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Phenolics, Total Recoverable	24.8	2.50	25	0	99.2	80 - 120		

MS	Sample ID:	HS18061286-02MS	Units:	mg/kg	Analysis Date: 02-Jul-2018 15:49			
Client ID:	Run ID:	UV-2450_319045	SeqNo:	4633206	PrepDate:	02-Jul-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Phenolics, Total Recoverable	35.53	2.49	24.95	13.92	86.6	80 - 120		

MSD	Sample ID:	HS18061286-02MSD	Units:	mg/kg	Analysis Date: 02-Jul-2018 15:49			
Client ID:	Run ID:	UV-2450_319045	SeqNo:	4633207	PrepDate:	02-Jul-2018	DF:	1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Phenolics, Total Recoverable	35.97	2.51	25.05	13.92	88.0	80 - 120	35.53	1.25 20

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

<b>Batch ID:</b> 130012	<b>Instrument:</b> TOC_03	<b>Method:</b> SW9060
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<b>MBLK</b>	Sample ID: MBLK-130012	Units: wt%-dry	Analysis Date: 02-Jul-2018 14:00					
Client ID:	Run ID: TOC_03_319060	SeqNo: 4633539	PrepDate: 29-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual

Total Organic Carbon < 0.0600 0.0600

<b>LCS</b>	Sample ID: LCS-130012	Units: wt%-dry	Analysis Date: 02-Jul-2018 14:00					
Client ID:	Run ID: TOC_03_319060	SeqNo: 4633538	PrepDate: 29-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual

Total Organic Carbon 97.43 0.0600 100 0 97.4 80 - 120

<b>MS</b>	Sample ID: HS18061322-01MS	Units: wt%-dry	Analysis Date: 02-Jul-2018 14:00					
Client ID: USOR-CT-01-180626	Run ID: TOC_03_319060	SeqNo: 4633536	PrepDate: 29-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual

Total Organic Carbon 66.67 0.0600 40 35.4 78.2 80 - 120 S

<b>MSD</b>	Sample ID: HS18061322-01MSD	Units: wt%-dry	Analysis Date: 02-Jul-2018 14:00					
Client ID: USOR-CT-01-180626	Run ID: TOC_03_319060	SeqNo: 4633537	PrepDate: 29-Jun-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual

Total Organic Carbon 67.27 0.0600 40 35.4 79.7 80 - 120 66.67 0.909 30 S

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: 130049	Instrument: UV-2450	Method: SW9014
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MLBK	Sample ID: MBLK-130049	Units: mg/Kg		Analysis Date: 03-Jul-2018 13:44				
Client ID:	Run ID: UV-2450_319115	SeqNo: 4634993	PrepDate: 03-Jul-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	< 0.300	2.00						

LCS	Sample ID: LCS-130049	Units: mg/Kg		Analysis Date: 03-Jul-2018 13:44				
Client ID:	Run ID: UV-2450_319115	SeqNo: 4634992	PrepDate: 03-Jul-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	10	2.00	10	0	100	80 - 120		

MS	Sample ID: HS18061420-02MS	Units: mg/Kg		Analysis Date: 03-Jul-2018 13:44				
Client ID:	Run ID: UV-2450_319115	SeqNo: 4634990	PrepDate: 03-Jul-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	8.941	1.91	9.563	0.4456	88.8	75 - 125		

MSD	Sample ID: HS18061420-02MSD	Units: mg/Kg		Analysis Date: 03-Jul-2018 13:44				
Client ID:	Run ID: UV-2450_319115	SeqNo: 4634991	PrepDate: 03-Jul-2018	DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Cyanide	8.821	1.89	9.434	0.4456	88.8	75 - 125	8.941	1.36 30

The following samples were analyzed in this batch: HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R318772		Instrument: WetChem_HS		Method: SW9045B			
DUP	Sample ID: HS18061326-07DUP	Units: pH Units		Analysis Date: 27-Jun-2018 14:45			
Client ID:		Run ID: WetChem_HS_318772	SeqNo: 4627683	PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value %RPD
pH	6.41	0.100		6.49	1.24	10	
Temp Deg C @pH	28.1	0		28.1	0	10	

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R318973		Instrument: WetChem_HS		Method: SW7.3.4.2					
MLBK	Sample ID: MBLK-318973			Units: mg/Kg		Analysis Date: 29-Jun-2018 16:36			
Client ID:		Run ID: WetChem_HS_318973	SeqNo: 4631674	PrepDate:					DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Reactive Sulfide	< 100	100							
LCS	Sample ID: LCS-318973			Units: mg/Kg		Analysis Date: 29-Jun-2018 16:36			
Client ID:		Run ID: WetChem_HS_318973	SeqNo: 4631675	PrepDate:					DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Reactive Sulfide	64	10.0	100	0	64.0	20 - 120			
MS	Sample ID: HS18061287-01MS			Units: mg/Kg		Analysis Date: 29-Jun-2018 16:36			
Client ID:		Run ID: WetChem_HS_318973	SeqNo: 4631677	PrepDate:					DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Reactive Sulfide	64	10.0	100	0	64.0	20 - 120			
The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03									

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

<b>Batch ID:</b> R318975	<b>Instrument:</b> UV-2450	<b>Method:</b> SW7.3.3.2
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MLBK	Sample ID:	MLBK-318975	Units:	mg/Kg	Analysis Date: 29-Jun-2018 16:46			
Client ID:	Run ID:	UV-2450_318975	SeqNo:	4631699	PrepDate:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Reactive Cyanide	< 100	100						

LCS	Sample ID:	LCS-318975	Units:	mg/Kg	Analysis Date: 29-Jun-2018 16:46			
Client ID:	Run ID:	UV-2450_318975	SeqNo:	4631700	PrepDate:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Reactive Cyanide	0.71	10.0	10	0	7.10	5 - 100		J

MS	Sample ID:	HS18061287-01MS	Units:	mg/Kg	Analysis Date: 29-Jun-2018 16:46			
Client ID:	Run ID:	UV-2450_318975	SeqNo:	4631702	PrepDate:	DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Reactive Cyanide	0.52	10.0	10	0	5.20	5 - 100		J

The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QC BATCH REPORT**

Batch ID: R319059		Instrument: WetChem_HS		Method: SW1030				
DUP	Sample ID: HS18061322-03DUP	Units: Burn Rate, mm/sec	Analysis Date: 02-Jul-2018 14:30					
Client ID: USOR-AB-02-180626	Run ID: WetChem_HS_319059	SeqNo: 4633487	PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ignitability, Solid	Negative	0				0	0	25
The following samples were analyzed in this batch: HS18061322-01 HS18061322-02 HS18061322-03								

Note: See Qualifiers Page for a list of qualifiers and their explanation.

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**WorkOrder:** HS18061322

**QUALIFIERS,  
ACRONYMS, UNITS**

<b>Qualifier</b>	<b>Description</b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

<b>Acronym</b>	<b>Description</b>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<b>Unit Reported</b>	<b>Description</b>
Date	
mg/Kg	Milligrams per Kilogram
mg/L	Milligrams per Liter

**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

Agency	Number	Expire Date
California	2919 2016-2018	31-Jul-2018
Oklahoma	2017-088	31-Aug-2018
North Carolina	624-2018	31-Dec-2018
Arkansas	88-0356	27-Mar-2019
Kansas	E-10352 2017-218	31-Jul-2018
Texas	T10470231-18-21	30-Apr-2019
North Dakota	R193 2018-2019	30-Apr-2019
Illinois	004438	29-Jun-2019
Louisiana	03087	30-Jun-2019
Dept of Defense	L2231 Rev 3-30-2018	22-Dec-2018
Kentucky	123043 - 2018	30-Apr-2019

**Client:** Golder Associates Inc.  
**Project:** Former MCC Recycling Site  
**Work Order:** HS18061322

**SAMPLE TRACKING**

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS18061322-01	USOR-CT-01-180626	Login	6/26/2018 3:20:10 PM	PMG	SPA143
HS18061322-01	USOR-CT-01-180626	Login	6/26/2018 3:20:10 PM	PMG	SPA143
HS18061322-01	USOR-CT-01-180626	Login	6/26/2018 3:20:10 PM	PMG	Sub
HS18061322-01	USOR-CT-01-180626	Login	6/26/2018 3:20:10 PM	PMG	Sub
HS18061322-01	USOR-CT-01-180626	Login	6/26/2018 3:20:10 PM	PMG	VOA090
HS18061322-01	USOR-CT-01-180626	Login	6/26/2018 3:20:10 PM	PMG	LF051
HS18061322-02	USOR-AB-01-180626	Login	6/26/2018 3:20:10 PM	PMG	SPA143
HS18061322-02	USOR-AB-01-180626	Login	6/26/2018 3:20:10 PM	PMG	Sub
HS18061322-02	USOR-AB-01-180626	Login	6/26/2018 3:20:10 PM	PMG	Sub
HS18061322-02	USOR-AB-01-180626	Login	6/26/2018 3:20:10 PM	PMG	VOA090
HS18061322-02	USOR-AB-01-180626	Login	6/26/2018 3:20:10 PM	PMG	LF051
HS18061322-03	USOR-AB-02-180626	Login	6/26/2018 3:20:10 PM	PMG	SPA143
HS18061322-03	USOR-AB-02-180626	Login	6/26/2018 3:20:10 PM	PMG	Sub
HS18061322-03	USOR-AB-02-180626	Login	6/26/2018 3:20:10 PM	PMG	Sub
HS18061322-03	USOR-AB-02-180626	Login	6/26/2018 3:20:10 PM	PMG	VOA090
HS18061322-03	USOR-AB-02-180626	Login	6/26/2018 3:20:10 PM	PMG	LF051

**Sample Receipt Checklist**

Client Name: PBW - Houston  
 Work Order: HS18061322

Date/Time Received: 26-Jun-2018 14:55  
 Received by: PJM

Checklist completed by:	<i>Paresh M. Giga</i> eSignature	26-Jun-2018 Date	Reviewed by:	<i>Dane J. Wacasey</i> eSignature	30-Jun-2018 Date
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Matrices: Sludge Carrier name: Client

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
TX1005 solids received in hermetically sealed vials?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Temperature(s)/Thermometer(s): 0.9c/0.3c U/C | IR25

Cooler(s)/Kit(s): 44084

Date/Time sample(s) sent to storage: 6/26/18 15:35

Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted

Water - pH acceptable upon receipt? Yes  No  N/A

pH adjusted? Yes  No  N/A

pH adjusted by: \_\_\_\_\_

Login Notes: All TPH vials appear to contain <10g.  
 Samples matrix logged in as sludge

Client Contacted: \_\_\_\_\_ Date Contacted: \_\_\_\_\_ Person Contacted: \_\_\_\_\_

Contacted By: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action: \_\_\_\_\_

Cincinnati, OH  
+1 513 733 5336Everett, WA  
+1 425 356 2600Fort Collins, CO  
+1 970 490 1511Holland, MI  
+1 616 399 6070

## Chain of Custody Form

Page 1 of 1Houston, TX  
+1 281 530 5656Middletown, PA  
+1 717 944 5541Spring City, PA  
+1 610 948 4444Salt Lake City, UT  
+1 801 266 7700

COC ID: 183973

Customer Information		Project Information		Parameter/Method Request for Analysis													
Purchase Order		Project Name	Former MCC Recycling Site Solids	A	8260 VOCs , *5035*/TX1005 TPH												
Work Order		Project Number		B	Hex Cr, Tri Cr, pH, Ignitability												
Company Name	Golder Associates Inc.	Bill To Company	Golder Associates Inc.	C	8270 SVOC, 8081 Pest/PCB, 8151 Herb												
Send Report To	Eric Pastor	Invoice Attn	Accounts Payable	D	6020/7471/6010 Total Metals (18)/Hg/Bismuth												
Address	11231 Richmond Avenue Suite D104	Address	11231 Richmond Avenue Suite D104	E	Phenols / TOC												
City/State/Zip	Houston, TX 77082	City/State/Zip	Houston TX 77082	F	Total Cyanide / Available Cyanide												
Phone	(832) 916-3691	Phone	(832) 916-3691	G	Oil & Grease												
Fax		Fax		H	TCLP VOC												
e-Mail Address	Eric_Pastor@golder.com	e-Mail Address	Accounting@pbwlcc.com	I	TCLP SVOC, TCLP Pests, TCLP Herbs, TCLP RCRA8												
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	VSUR-CT-01-180626	6/26/18	11:30	Solid	8.9	5	X	X	X	X	X	X	X	X	X	X	X
2	VSUR-AB-01-180626		1330			1	X	X	X	X	X	X	X	X	X	X	X
3	VSUR-AB-02-180626		1340			1	X	X	X	X	X	X	X	X	X	X	X
4																	
5																	
6																	
7																	
8																	
9																	
10																	

**HS18061322**

Golder Associates Inc.  
Former MCC Recycling Site

Sampler(s) Please Print & Sign: <i>Kate Phillips</i>	Shipment Method: <i>Drop off</i>	Required Turnaround Time: (Check Box)	<input type="checkbox"/> Other	Results Due Date:		
<i>Kate Phillips/SCOT Atwater</i>		<input type="checkbox"/> STD 10 Wk Days	<input checked="" type="checkbox"/> 5 Wk Days	<input type="checkbox"/> 2 Wk Days	<input type="checkbox"/> 24 Hour	
Relinquished by: <i>Kate Phillips</i>	Date: <i>6/26/18</i>	Time: <i>14:55</i>	Received by:	Notes: <b>MCC Recycling Site</b>		
Relinquished by: <i>Kate Phillips</i>	Date: <i>6/26/18</i>	Time: <i>14:55</i>	Received by (Laboratory): <i>PM</i>	Cooler ID: <i>44024</i>	Cooler Temp: <i>UC</i>	QC Package: (Check One Box Below)
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	<input checked="" type="checkbox"/> Level II Std QC	<input type="checkbox"/> TRAP Checklist	
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>3</sub> 7-Other 8-4°C 9-5035				<input type="checkbox"/> Level III Std QC/Raw Data	<input type="checkbox"/> TRRP Level IV	
						Level IV SW846/CLP
						Other

- note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.  
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.  
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Copyright 2011 by ALS Environmental.



Ft. Collins, Colorado

LIMS Version: 6.865

Page 1 of 1

Monday, July 02, 2018

Dane Wacasey  
ALS Environmental  
10450 Stancliff Rd, Suite 210  
Houston, TX 77099

Re: ALS Workorder: 1806669

Project Name:

Project Number: HS18061322

Dear Mr. Wacasey:

Three sludge samples were received from ALS Environmental, on 6/27/2018. The samples were scheduled for the following analysis:

Metals

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff R. Kujawa".

ALS Environmental  
Jeff R. Kujawa  
Project Manager

ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280



# 1806669

**Metals:**

The samples were analyzed following SW-846, 3<sup>rd</sup> Edition procedures. Analysis by Trace ICP followed method 6010B and the current revision of SOP 834.

All acceptance criteria were met.

# ALS -- Fort Collins

## Sample Number(s) Cross-Reference Table

---

**OrderNum:** 1806669

**Client Name:** ALS Environmental

**Client Project Name:**

**Client Project Number:** HS18061322

**Client PO Number:** 10-9353

---

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
USOR-CT-01-180626	1806669-1		SLUDGE	26-Jun-18	11:30
USOR-AB-01-180626	1806669-2		SLUDGE	26-Jun-18	13:30
USOR-AB-02-180626	1806669-3		SLUDGE	26-Jun-18	13:40



1806669

10450 Stancliff Rd, Ste 210  
Houston, TX 77099  
T: +1 281 530 5656  
F: +1 281 530 5887  
[www.alsglobal.com](http://www.alsglobal.com)

## Subcontract Chain of Custody

COC ID: 9353

**SUBCONTRACT TO:**

ALS Environmental, Fort Collins  
225 Commerce Drive  
Fort Collins, CO 80524

Phone: +1 970 490 1511

**CUSTOMER INFORMATION:**

**Company:** ALS Houston  
**Contact:** Dane J. Wacasey  
**Address:** 10450 Stancliff Rd, Ste 210  
**Phone:** +1 281 530 5656  
**Email:** Dane.Wacasey@alsglobal.com  
**Alternate Contact:**  
**Email:**

**INVOICE INFORMATION:**

**Company:** ALS Houston  
**Contact:** Accounts Payable  
**Address:** 10450 Stancliff Rd, Ste 210  
**Phone:** +1 281 530 5656  
**Reference:** HS18061322  
**TSR:** Jennifer Bell

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	<b>HS18061322-01</b>	<b>USOR-CT-01-180626</b>	<b>Sludge</b>	<b>26 Jun 2018 11:30</b>
	Bismuth;Lvl2 MDL PDF,Excel EDD;5d TAT			03 Jul 2018
2.	<b>HS18061322-02</b>	<b>USOR-AB-01-180626</b>	<b>Sludge</b>	<b>26 Jun 2018 13:30</b>
	Bismuth;Lvl2 MDL PDF,Excel EDD;5d TAT			03 Jul 2018
3.	<b>HS18061322-03</b>	<b>USOR-AB-02-180626</b>	<b>Sludge</b>	<b>26 Jun 2018 13:40</b>
	Bismuth;Lvl2 MDL PDF,Excel EDD;5d TAT			03 Jul 2018

**Comments:** Please analyze for the analysis listed above.  
Send report to the emails shown above.

**QC Level:** STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By:

Date/Time:

6/26/18 1800

Received By:

Date/Time:

6/27/18 10:25

Cooler ID(s):

Temperature(s):



**ALS Environmental - Fort Collins**  
**CONDITION OF SAMPLE UPON RECEIPT FORM**

Client: ALS TX

Workorder No: 1806669

Project Manager: JK

Initials: JK Date: 6/27/18

1. Does this project require any special handling in addition to standard ALS procedures?	YES	NO
2. Are custody seals on shipping containers intact?	NONE	YES NO
3. Are Custody seals on sample containers intact?	NO	YES NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?	YES	NO
5. Are the COC and bottle labels complete and legible?	YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)	YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	YES NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	YES NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	YES NO
10. Is there sufficient sample for the requested analyses?	YES	NO
11. Were all samples placed in the proper containers for the requested analyses?	YES	NO
12. Are all samples within holding times for the requested analyses?	YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)	YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: _____ < green pea _____ > green pea	N/A	YES NO
15. Do any water samples contain sediment?	Amount	
Amount of sediment: dusting moderate heavy	N/A	YES NO
16. Were the samples shipped on ice?	YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #1 #3 #4	RAD ONLY YES NO
Cooler #: <u>1</u>		
Temperature (°C): <u>23.0</u>		
No. of custody seals on cooler: <u>2</u>		
External µR/hr reading: <u>13</u>		
Background µR/hr reading: <u>12</u>		
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO / NA (If no, see Form 008.)		

**Additional Information:** PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

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If applicable, was the client contacted? YES / NO / NA Contact: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Project Manager Signature / Date:

JM 6-27-18

\*IR Gun #1, VWR SN 170560549

\*IR Gun #3, VWR SN 170647571

\*IR Gun #4, Oakton SN 1272220101-0002

1806669

23.0°



B-2

ORIGIN ID: SGRA (281) 530-5656  
SHIPPING DEPT ACTWG: 0.20 LB  
ALS LABORATORY GROUP CAD: 300130/CAFE3111  
10450 STANCLIFF DIMS: 14x11x10 IN  
SUITE 210  
HOUSTON, TX 77099  
UNITED STATES US

BILL SENDER

TO SAMPLE RECEIVING  
ALS ENVIRONMENTAL  
225 COMMERCE DRIVE

FORT COLLINS CO 80524

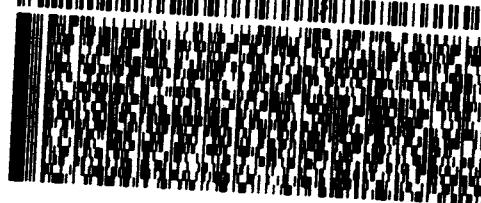
(970) 480-1511

REF: HS18061277/1286/1322 - DW

5day

5462/93MF/53C1

5462/93MF/53C1



FedEx  
Express



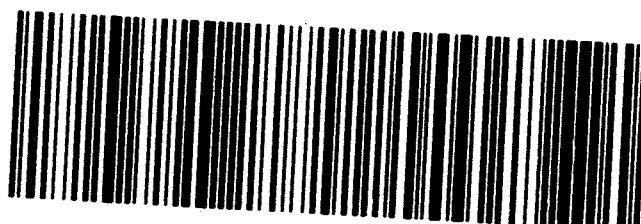
J1770161020014

TRK#  
0201 4380 9530 4189

WED - 27 JUN 3:00P  
STANDARD OVERNIGHT

AG FTCA

80524  
CO-US DEN



**Client:** ALS Environmental **Date:** 02-Jul-18  
**Project:** HS18061322 **Work Order:** 1806669  
**Sample ID:** USOR-CT-01-180626 **Lab ID:** 1806669-1  
**Legal Location:** **Matrix:** SLUDGE  
**Collection Date:** 6/26/2018 11:30 **Percent Moisture:** 79.6

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals BISMUTH	ND		SW6010 9600	UG/KG	Prep Date: 6/28/2018 1	PrepBy: JML 6/29/2018 13:24

**Client:** ALS Environmental **Date:** 02-Jul-18  
**Project:** HS18061322 **Work Order:** 1806669  
**Sample ID:** USOR-AB-01-180626 **Lab ID:** 1806669-2  
**Legal Location:** **Matrix:** SLUDGE  
**Collection Date:** 6/26/2018 13:30 **Percent Moisture:** 80.8

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals BISMUTH	ND		SW6010	10000 UG/KG	Prep Date: 6/28/2018 1	PrepBy: JML 6/29/2018 13:27

**Client:** ALS Environmental **Date:** 02-Jul-18  
**Project:** HS18061322 **Work Order:** 1806669  
**Sample ID:** USOR-AB-02-180626 **Lab ID:** 1806669-3  
**Legal Location:** **Matrix:** SLUDGE  
**Collection Date:** 6/26/2018 13:40 **Percent Moisture:** 90.9

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
ICP Metals BISMUTH	ND		SW6010 22000	UG/KG	Prep Date: 6/28/2018 1	PrepBy: JML 6/29/2018 13:36

**Client:** ALS Environmental **Date:** 02-Jul-18  
**Project:** HS18061322 **Work Order:** 1806669  
**Sample ID:** USOR-AB-02-180626 **Lab ID:** 1806669-3  
**Legal Location:** **Matrix:** SLUDGE  
**Collection Date:** 6/26/2018 13:40 **Percent Moisture:** 90.9

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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### Explanation of Qualifiers

#### Radiochemistry:

- "Report Limit" is the MDC
  - U or ND - Result is less than the sample specific MDC.
  - Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
  - Y2 - Chemical Yield outside default limits.
  - W - DER is greater than Warning Limit of 1.42
  - \* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
  - # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
  - G - Sample density differs by more than 15% of LCS density.
  - D - DER is greater than Control Limit
  - M - Requested MDC not met.
  - LT - Result is less than requested MDC but greater than achieved MDC.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

#### Inorganics:

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- \* - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

#### Organics:

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- \* - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
  - gasoline
  - JP-8
  - diesel
  - mineral spirits
  - motor oil
  - Stoddard solvent
  - bunker C

ALS -- Fort Collins

Date: 7/2/2018 12:34:

Client: ALS Environmental

## QC BATCH REPORT

Work Order: 1806669

Project: HS18061322

Batch ID: IP180628-2-1

Instrument ID ICP6500

Method: SW6010

LCS	Sample ID: IP180628-2			Units: UG/KG			Analysis Date: 6/29/2018 13:06				
Client ID:	Run ID: IP180629-1A6						Prep Date: 6/28/2018		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD RPD	RPD Limit	Qual
BISMUTH	101000	2000	100000	101	80-120					20	
LCSD	Sample ID: IP180628-2			Units: UG/KG			Analysis Date: 6/29/2018 13:09				
Client ID:	Run ID: IP180629-1A6						Prep Date: 6/28/2018		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD RPD	RPD Limit	Qual
BISMUTH	100000	2000	100000	100	80-120				101000	1	20
MB	Sample ID: IP180628-2			Units: UG/KG			Analysis Date: 6/29/2018 13:03				
Client ID:	Run ID: IP180629-1A6						Prep Date: 6/28/2018		DF: 1		
Analyte	Result	ReportLimit									Qual
BISMUTH	ND	2000									

The following samples were analyzed in this batch:

1806669-1      1806669-2      1806669-3

QC Page: 1 of 1

ALS -- Fort Collins

LIMS Version: 6.865  
Page 115 of 125



02-Jul-2018

Dane J. Wacasey  
ALS Environmental  
10450 Stancliff Rd  
Suite 210  
Houston, TX 77099

Re: **HS18061322**

Work Order: **18061791**

Dear Dane,

ALS Environmental received 3 samples on 27-Jun-2018 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA  
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton  
Project Manager

### Report of Laboratory Analysis

Certificate No: MN 998501

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

**Client:** ALS Environmental  
**Project:** HS18061322  
**Work Order:** **18061791**

**Work Order Sample Summary**

<b>Lab Samp ID</b>	<b>Client Sample ID</b>	<b>Matrix</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>	<b>Hold</b>
18061791-01	HS18061322-01	Sludge	USOR-CT-01-180626	6/26/2018 11:30	6/27/2018 09:30	<input type="checkbox"/>
18061791-02	HS18061322-02	Sludge	USOR-AB-01-180626	6/26/2018 13:30	6/27/2018 09:30	<input type="checkbox"/>
18061791-03	HS18061322-03	Sludge	USOR-AB-02-180626	6/26/2018 13:40	6/27/2018 09:30	<input type="checkbox"/>

**Client:** ALS Environmental  
**Project:** HS18061322  
**WorkOrder:** 18061791

**QUALIFIERS,  
ACRONYMS, UNITS**

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	Percent of Sample
µg/Kg	Micrograms per Kilogram

**Client:** ALS Environmental  
**Project:** HS18061322  
**Sample ID:** HS18061322-01  
**Collection Date:** 6/26/2018 11:30 AM

**Work Order:** 18061791  
**Lab ID:** 18061791-01  
**Matrix:** SLUDGE

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>CYANIDE, AVAILABLE</b> Cyanide, Available	290		24	40	µg/Kg	1	Analyst: MB 6/29/2018 10:00
<b>MOISTURE</b> Moisture	84		0.025	0.050	% of sample	1	Analyst: NW 6/28/2018 14:45

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** ALS Environmental  
**Project:** HS18061322  
**Sample ID:** HS18061322-02  
**Collection Date:** 6/26/2018 01:30 PM

**Work Order:** 18061791  
**Lab ID:** 18061791-02  
**Matrix:** SLUDGE

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>CYANIDE, AVAILABLE</b> Cyanide, Available			Method: OIA 1677 24	40	µg/Kg	1	Analyst: MB 6/29/2018 10:00
<b>MOISTURE</b> Moisture	88		Method: SW3550C 0.025	0.050	% of sample	1	Analyst: NW 6/28/2018 14:45

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** ALS Environmental  
**Project:** HS18061322  
**Sample ID:** HS18061322-03  
**Collection Date:** 6/26/2018 01:40 PM

**Work Order:** 18061791  
**Lab ID:** 18061791-03  
**Matrix:** SLUDGE

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>CYANIDE, AVAILABLE</b> Cyanide, Available	230		24	40	µg/Kg	1	Analyst: MB 6/29/2018 10:00
<b>MOISTURE</b> Moisture	92		0.025	0.050	% of sample	1	Analyst: NW 6/28/2018 14:45

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

**Client:** ALS Environmental  
**Work Order:** 18061791  
**Project:** HS18061322

**QC BATCH REPORT**

Batch ID: **120506**      Instrument ID **FS3100**      Method: **OIA 1677**

<b>MBLK</b>		Sample ID: <b>MBLK-120506-120506</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/29/2018 10:00 AM</b>			
Client ID:		Run ID: <b>FS3100_180629D</b>			SeqNo: <b>5121548</b>		Prep Date: <b>6/28/2018</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Available	U	40								
<b>LCS</b>		Sample ID: <b>LCS-120506-120506</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/29/2018 10:00 AM</b>			
Client ID:		Run ID: <b>FS3100_180629D</b>			SeqNo: <b>5121547</b>		Prep Date: <b>6/28/2018</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Available	986	40	1000	0	98.6	82-132		0		
<b>MS</b>		Sample ID: <b>18061774-03AMS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/29/2018 10:00 AM</b>			
Client ID:		Run ID: <b>FS3100_180629D</b>			SeqNo: <b>5121541</b>		Prep Date: <b>6/28/2018</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Available	1728	39	984.3	772.2	97.1	82-130		0		
<b>MSD</b>		Sample ID: <b>18061774-03AMSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/29/2018 10:00 AM</b>			
Client ID:		Run ID: <b>FS3100_180629D</b>			SeqNo: <b>5121542</b>		Prep Date: <b>6/28/2018</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Available	1688	39	984.3	772.2	93	82-130	1728	2.35	11	

The following samples were analyzed in this batch:

18061791-01A	18061791-02A	18061791-03A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** ALS Environmental  
**Work Order:** 18061791  
**Project:** HS18061322

## QC BATCH REPORT

Batch ID: R239171      Instrument ID **MOIST**      Method: **SW3550C**

MBLK		Sample ID: <b>WBLKS-R239171</b>			Units: % of sample		Analysis Date: <b>6/28/2018 02:45 PM</b>			
Client ID:		Run ID: <b>MOIST_180628B</b>			SeqNo: <b>5120304</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Moisture		U		0.050						
LCS		Sample ID: <b>LCS-R239171</b>			Units: % of sample		Analysis Date: <b>6/28/2018 02:45 PM</b>			
Client ID:		Run ID: <b>MOIST_180628B</b>			SeqNo: <b>5120303</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Moisture		100	0.050	100	0	100	99.5-100.5	0		
DUP		Sample ID: <b>18061815-01A DUP</b>			Units: % of sample		Analysis Date: <b>6/28/2018 02:45 PM</b>			
Client ID:		Run ID: <b>MOIST_180628B</b>			SeqNo: <b>5120291</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Moisture		16.09	0.050	0	0	0	0-0	16.05	0.249	10
DUP		Sample ID: <b>18061815-05A DUP</b>			Units: % of sample		Analysis Date: <b>6/28/2018 02:45 PM</b>			
Client ID:		Run ID: <b>MOIST_180628B</b>			SeqNo: <b>5120296</b>		Prep Date:		DF: <b>1</b>	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	
Moisture		16.42	0.050	0	0	0	0-0	16.61	1.15	10

The following samples were analyzed in this batch:

18061791-01A	18061791-02A	18061791-03A
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



18061791

10450 Stancliff Rd, Ste 210  
Houston, TX 77099  
**T:** +1 281 530 5656  
**F:** +1 281 530 5887  
[www.alsglobal.com](http://www.alsglobal.com)

## Subcontract Chain of Custody

**COC ID: 9354****SUBCONTRACT TO:**

ALS Laboratory Group  
3352 128th Ave.  
Holland, MI 494249263

**Phone:** +1 616 399 6070

**CUSTOMER INFORMATION:**

**Company:** ALS Houston  
**Contact:** Dane J. Wacasey  
**Address:** 10450 Stancliff Rd, Ste 210  
**Phone:** +1 281 530 5656  
**Email:** Dane.Wacasey@alsglobal.com  
**Alternate Contact:**  
**Email:**

**INVOICE INFORMATION:**

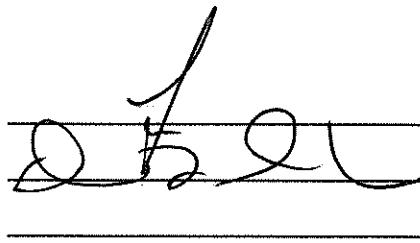
**Company:** ALS Houston  
**Contact:** Accounts Payable  
**Address:** 10450 Stancliff Rd, Ste 210  
**Phone:** +1 281 530 5656  
**Reference:** HS18061322  
**TSR:** Jennifer Bell

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE	DUE DATE
ANALYSIS REQUESTED					
1.	<b>HS18061322-01</b>	<b>USOR-CT-01-180626</b>	Sludge	<b>26 Jun 2018 11:30</b>	
	Avail.CN;Lvl2 MDL PDF,Exce EDD,5d TAT			03 Jul 2018	
2.	<b>HS18061322-02</b>	<b>USOR-AB-01-180626</b>	Sludge	<b>26 Jun 2018 13:30</b>	
	Avail.CN;Lvl2 MDL PDF,Exce EDD,5d TAT			03 Jul 2018	
3.	<b>HS18061322-03</b>	<b>USOR-AB-02-180626</b>	Sludge	<b>26 Jun 2018 13:40</b>	
	Avail.CN;Lvl2 MDL PDF,Exce EDD,5d TAT			03 Jul 2018	

**Comments:** Please analyze for the analysis listed above.  
Send report to the emails shown above.

**QC Level:** STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By:



Date/Time:

6/26/18 1800

Received By:

Date/Time:

6/27/18 0930

Cooler ID(s):

Temperature(s):

SP2 34°C

**Sample Receipt Checklist**Client Name: **ALS - HOUSTON**Date/Time Received: **27-Jun-18 09:30**Work Order: **18061791**Received by: **DS**

Checklist completed by <u>Diane Shaw</u> eSignature	27-Jun-18 Date	Reviewed by: <u>Chad Whetton</u> eSignature	28-Jun-18 Date
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Matrices: **Sludge**Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.4/3.4 c</u> <input type="checkbox"/> <u>SR2</u> <input type="checkbox"/>		
Cooler(s)/Kit(s):	<input type="checkbox"/>		
Date/Time sample(s) sent to storage:	<u>6/27/2018 2:48:24 PM</u> <input type="checkbox"/>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<input type="checkbox"/>		

Login Notes:

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Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: